SOUTHERN CALIFORNIA INTERNATIONAL AIRPORT

Comprehensive Airport Land Use Plan

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TABLE OF CONTENTS

PAGE

FIGURES AND TABLES

FIGURE **PAGE**

TABLE

MAPS

MAPS

1. Airport Layout Plan
2. Terminal Area Plan
3. Airport Land Use Plan
4. FAR Part 77 Imaginary Surfaces
5. Runway Approach Profiles

I. BACKGROUND

A. Introduction

Airports present unique public health and safety issues that require special land use planning efforts to insure protection of the public welfare. The State of California has long recognized that airports pose both acute and chronic public health and safety issues. Studies have shown that seventy percent of all aircraft accidents occur within five miles of an airport. Therefore, communities have used comprehensive airport land use plans, zoning, subdivision, and other land use control mechanisms which would reduce the potential of an accident, and if an accident did occur, these mechanisms would minimize the number of fatalities on the ground. The chronic effects of proximity to airports are associated with the exposure of people to moderate noise levels. The same land use controls noted previously have also been used to reduce these chronic impacts.

B. Authority for Comprehensive Airport Land Use Plan (CALUP)

In 1967, the State Legislature enacted airport land use laws mandating the creation of Airport Land Use Commissions (ALUCs) which would be charged to do the following:

* Provide for the orderly development of each public use airport in the State and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards and to prevent the creation of new noise and safety problems.

* Protect public health, safety and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

In 1993, Senate Bill 443 modified the law, making the establishment of an ALUC permissive rather than mandatory. As a result, the San Bernardino County, after consultation with all cities affected by airports, disbanded the ALUC per Resolution 93-295 on October 19, 1993, which became effective November 18, 1993. However, in 1994, Assembly Bill 2831 was enacted which, effective January 1, 1995, reinstated the requirement that, to address the potential for land use conflicts, each County in which there is an airport operated for the benefit of the general public establish either: (1) An ALUC; (2) a designated agency to act as the ALUC; or (3) an alternative process with a designated responsible agency or agencies. Specific to option (3), Public Utilities Code (PUC) § 21670.1 enables the county and each affected city to make a determination that proper land use planning may be accomplished through the actions of an appropriately designated body (or bodies) without an ALUC. Consistent with PUC § 21670.1, San Bernardino County and the cities of Adelanto and Victorville (all "affected agencies") have adopted resolutions supporting the establishment of an alternative process where each local, agency affected by the Southern California International Airport (SCIA) (formerly known as George Air Force Base) will serve as the responsible agency for projects within their jurisdiction.

Among the more significant provisions of airport planning law is the basic requirement for the ALUCs or, in this case, responsible agencies to prepare and adopt a Comprehensive Airport Land Use Plan (CALUP). Pursuant to resolutions 95-81, 95-26 and 95-46 adopted by the County, Adelanto, and Victorville, respectively, the agency responsible for the preparation, adoption, and

amendment of the CALUP, is the local jurisdiction that contains an airport within its boundaries in cooperation with adjacent impacted jurisdictions. As a result, in accordance with these resolutions and Public Utilities Code § 21670. l(c)(2), the City of Victorville has prepared this CALUP. In addition to the requirement for adopting this process, the Public Utilities Code also requires the County and the appropriate affected cities to do the following:

"1. Adopt processes for the notification of the general public, landowners, interested groups, and other public agencies regarding the preparation, adoption, and amendment of comprehensive airport land use plans."
"2. Adopt processes for the mediation of disputes arising from the preparation, adoption, and amendment of the comprehensive airport land use plans."
"3. Adopt processes for the amendment of general and specific plans to be consistent with the comprehensive airport land use plans."

As noted with number 3, above, city and county general plans must be, consistent with airport land use plans within a reasonable time after adoption. This requirement is expected to be satisfied through General Plan amendments and amendments to applicable implementation regulations such as development codes and/or building codes by the County of San Bernardino and cities of Adelanto and Victorville.

C. Application

This CALUP has been prepared for the development and operation of Southern California International Airport (SCIA). It has been prepared consistent with Federal and State law and it is the primary airport land use compatibility document for the planning area which is illustrated on f Figure 1 and discussed in Section II. which contains the compatibility matrix. Its purpose is fourfold:

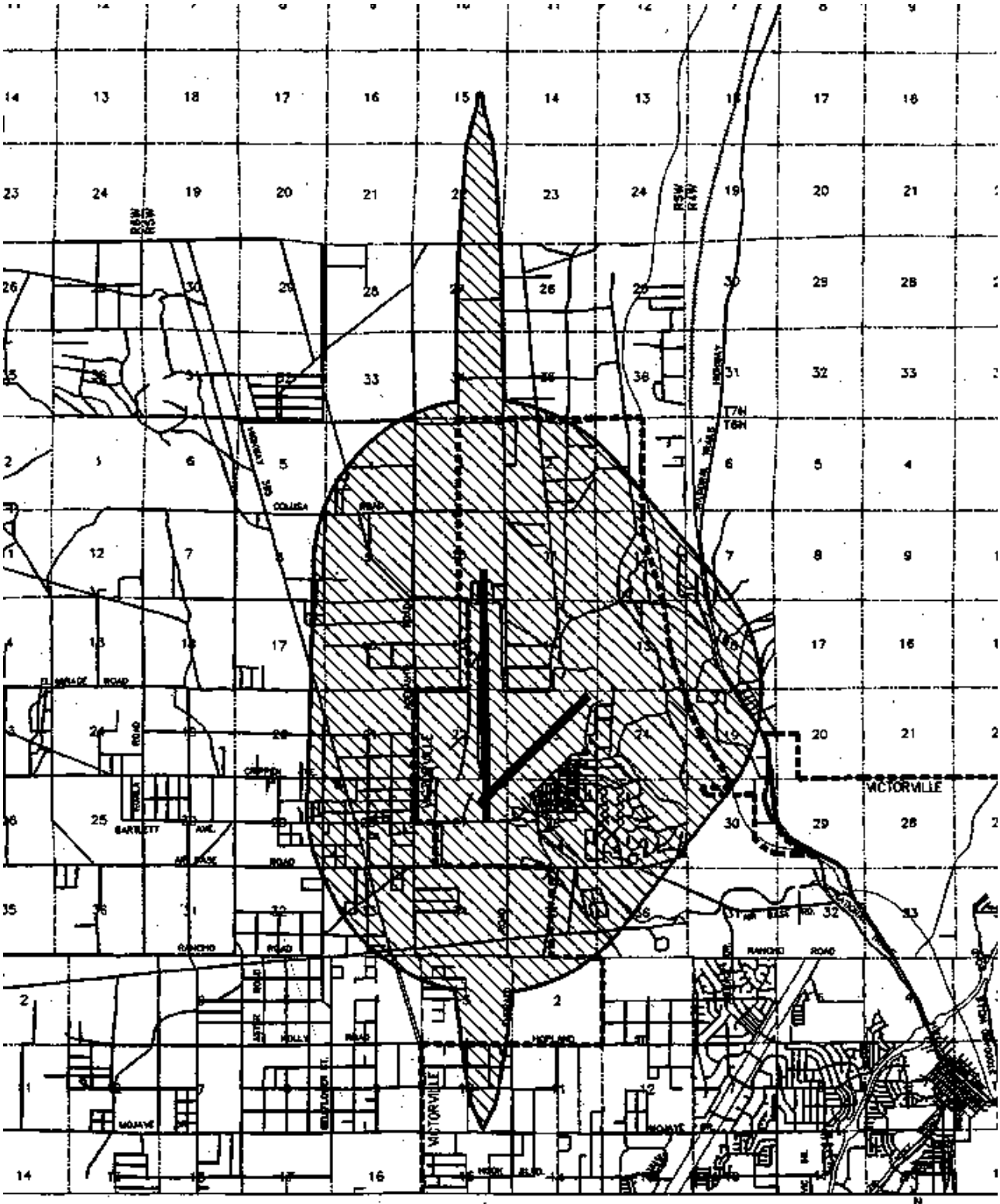
* To promote the development of compatible land uses in the area influenced by airport operations.

* To safeguard the general welfare of the inhabitants within the vicinity of the airport by minimizing exposure to excessive noise levels.

* To safeguard the general welfare of the inhabitants within the vicinity of the airport by minimizing exposure to crash hazards associated with aircraft operations.

* To safeguard the general welfare of aviation activities within the vicinity of the airport by imposing appropriate height restrictions for the protection of aircraft operations.

In accordance with Public Utilities Code § 21675(A), this Plan regulates use of land on and around SCIA to ensure compatibility by establishing height restrictions on buildings, specifying use of land, requiring noise attenuation in certain structures, as well as utilizing noise arid avigation easements. Generically termed a compatibility plan by the Department of Transportation, this Plan provides for the orderly growth of a public airport (SCIA) and the area surrounding the airport within the jurisdiction of the County and each affected city, and safeguards the general welfare of



SCIA CALUP PLANNING AREA BOUNDARIES | FIGURE 1

the inhabitants within the vicinity of the airport and the public in general.[1] Further, this Plan has been prepared in consultation with the Department of Transportation, Aeronautics Program and is consistent with the Program's Airport Land Use Planning Handbook as required by Public Utilities Code § 21674.7.

D. Southern California International Airport - Description

Southern California International Airport (SCIA), a portion of the deactivated George Air Force Base (GAFB), is approximately 4,075 acres in area. The entire 5,350 acre George Air Force Base site is located on a slight ridge sloping toward the north and northeast. Half of the site is virtually level (less than two percent slope), making it suitable for aircraft runways. The highest elevation within the planning boundary is 2,920 feet mean sea level (MSL) at the southwestern corner of the property, south of Air Base Road, and the lowest elevation is 2,650 feet MSL at the northeastern corner of the property. Adjacent to the Mojave River, east of the airport, there are scattered areas (totaling about 100 acres) of slopes greater than 25 percent.

Approximately 32 percent of the GAFB site is currently vacant. These vacant properties contain areas of natural habitat, particularly along the Mojave River. Table 1 provides a breakdown of the existing developed land uses within the GAFB site. The specific uses may be altered with the reuse of the military facilities; however, the uses listed here indicate the intended purpose of the structures existent on the project site. Map 3 spatially depicts the existing land uses for SCIA.

Southern California International Airport currently has two runways. The primary runway is identified as 17/35, which is currently 10,050 feet long and 150 feet wide, and is oriented in a north-south direction. This primary runway is projected to be extended 4,000 feet on the north end and 1,000 feet on the south end so that its overall length will be 15,050. This CALUP is based on the projected 5,000-foot extension to the runway and the 2020 aircraft operations forecast contained in the Southern California International Airport SCIA Aircraft Operations Forecast which was prepared for the Southern California International Airport Authority by RMJ & Associates dated January 28, 1998. The second runway, identified as 3/21, is 9,116 feet long and 150 feet wide, and is oriented for crosswinds in a northeasterly-southwesterly direction. Both runways also have stopways/blastpads extending beyond each runway end in lengths ranging from 1,000 feet to 1,266 feet. These runways are, or are proposed to be, precision instrument type for runway 17, and non- precision instrument type for all others. This compatibility plan is based upon these designations as well as the City of Victorville's approved-Southern California International Airport Specific Plan which is the primary planning document reflecting the anticipated growth of the airport and related facilities over a twenty-year period as required by § 21675(a) of the Public Utilities Code.

E. Criteria for Determining Land Use Compatibility - Noise

Noise is unwanted sound. Physical health, psychological stability, social cohesion, property values and economic productivity are affected by excessive amounts of noise.

It is recognized that a given level of noise may be more or less tolerable depending on the duration of exposure and the tune of day during which the noise is experienced. Many communities are

[1] California Department of Transportation Division of Aeronautics, “Airport Land Use Planning Handbook,” December 1993, Chapter 2.

affected to some degree by noise from airport operations. At lower levels, aircraft noise can interfere with sleep, conversation or relaxation. It may also disrupt school and work activities. At higher levels, airport noise may make outdoor activities impossible and may cause health problems.

LAND USE	ACREAGE	% OF TOTAL
Airport Facilities	2,418	45.2
Aviation Support	133	2.5
Industrial	197	3.7
Commercial	135	2.5
Medical	12	0.2
Educational	36	0.7
Residential	386	7.2
Recreational/Public	317	5.9
Vacant	1,441	27.0
Navigation Easement (Vacant)	275	5.1
TOTAL	5,350	100.0
Source: Economic Research Associates, George Air Force Base Overall Reuse Plan, October 23, 1991 *Note: Developed land uses are not completely occupied as of this date.		

There are several methods available to measure noise. For airport planning purposes, the California Department of Transportation, Aeronautics Program, uses the Community Noise Equivalent Level (CNEL). This measure weights the average noise level for the evening hours (7 p.m. to 10 p.m.) by 5 decibels (dB), and the late evening and early morning hours (10 p.m. to 7 a.m.) by 10 dB. The unweighted daytime noise levels are combined with these weighted levels and averaged to obtain a CNEL value.

Federal agencies, such as the Federal Aviation Administration (FAA), Department of Defense (DOD), Environmental Protection Agency (EPA, and Department of Housing and Urban Development (HUD) use the Day-Night Average Sound Level (Ldn) descriptor for measuring noise impacts. This measure is similar to the CNEL measure; however, it does not weight the evening hours (7 p.m. to 10 p.m.). Nevertheless, the CNEL and Ldn methods of noise measurement will be approximately equal (usually ±1 dB).[2] Consequently, any reference to Ldn measurements equates to CNEL.

Airport noise levels and impact boundaries are commonly determined by one of two ways. The first method is to establish CNEL through sound monitoring and recording equipment located at strategic points within the airport environs. The accumulated data can then be converted to contours that reflect the limits of a particular noise level. The second method is to forecast CNEL contours by reference to noise studies completed by sound monitoring methodology. The following factors are included in the analysis leading to the estimation of CNEL contours:

* Airport (runway) configuration, including local terrain.

[2] California Department of Transportation Division of Aeronautics, "Airport Land Use Planning Handbook," December 1993, Chapter 7.

* Airport/aircraft operations, including such factors as runway utilization; frequency of aircraft operations by type aircraft; day-evening-night activity levels; and traffic patterns including approach and departure procedures.

* Single event noise exposure level for specified aircraft type classifications.

The Integrated Noise Model (INM) developed for the FAA utilized these factors in establishing noise contours for SCIA.[3]

The standard for an acceptable level of aircraft noise for persons living in the vicinity of airports is established to be an exterior Community Noise Equivalent Level of 65 decibels.[4] This-noise exposure level has been determined to be reasonable for persons residing hi urban residential areas where homes are of typical California construction and the ulterior noise level can be reduced to 45 decibels. Illustratively, 65 dB is representative of a typical conversation (normal speech) at; three feet. The intention of the 65 CNEL contour is to identify areas within .the airport environment that are exposed to noise levels that are considered annoying, disruptive and potentially physiologically harmful to people. From this maximum exterior noise exposure level for residential land uses, standards were created from which other land use activity can be judged for noise compatibility.

Table 2 presents Interior/Exterior Noise Level Standards for Mobile Noise Sources. The standards reflect the maximum permitted ulterior and exterior noise levels for specific land use categories. As shown, 65 dB is the maximum CNEL for all land use categories, except industrial/manufacturing activities, which by omission, have higher noise level thresholds.

Figure 2 shows land use compatibility based on community noise lever exposure consistent with California Noise Element law.

This CALUP combines the data from both the Interior/Exterior Noise Level Standards -Mobile Noise Sources chart and the Land Use Compatibility for Community Noise Environments chart to produce the Land Use Compatibility Noise Environments - SCIA chart which is shown on Figure 3f This noise compatibility chart is designed to use the 65 CNEL as the primary reference level for land use compatibility. Modifications to the various compatibility ranges have been made to create this standard. Generally, the "normally acceptable" and "conditionally acceptable" ranges were reduced and the "normally unacceptable" range was expanded for residential/institutional type uses. The "clearly unacceptable" range remained essentially unchanged.

Figure 4 represents the 65 CNEL impact area for commercial airport operations based upon the projected annual aircraft operations and the type of aircraft at build-out (2010)[5]. (See Appendix D - Aircraft Operations Forecast.) If the actual operations of SCIA differ from the forecasted aircraft

[3] P & D Technologies, "Airport Master Plan for the Civilian Use of George Air Force Base," September 1990, Chapter 8 and RMJ & Associates, "Southern California International Airport SCIA Airport Operations Forecast," January 28, 1998.

[4] California Administrative Code, Title 21, Section 5012.

[5] "Analysis of Noise Impacts for Civilian Use of George Air Force Base," Mestre Greve Associates, April 1992.

operations which were the basis for the noise model, a re-evaluation of the noise generation will occur by the SCIA operator. Results of the re-evaluation which show noise contours covering a greater area than contained in this plan shall require a plan amendment pursuant to Section HE. The majority of the land impacted is zoned for commercial and industrial uses. Table 3 depicts the impact areas and the potential number of existing residential population affected by noise from aircraft noise. As can be seen, no residential unit population is anticipated to be affected from aircraft noise at build-out of SCIA. However, non-residential land uses are located within, and will be impacted by, SCIA's 65 CNEL noise contour.

F. Criteria for Determining Land Use Compatibility - Airport Safety

There are two basic components of airport safety - the safety of those in the aircraft and the safety of those on the ground. The first involves protection of airspace required for safe aircraft operations. The second deals with compatibility of surrounding land uses in terms of exposing people and property on the ground to crash hazards associated with aircraft operations.

Protection of airspace is most commonly accomplished through restrictions on structure height. Under Federal Aviation Regulations (FAR) Part 77, height restrictions for development within airport approach and departure patterns ("navigable airspace") were established to allow aircraft maneuvering room and to ensure that neither the operating capability of the airport nor the usable runway is adversely affected by obstructions in the surrounding airspace.[6]

1. Aircraft Safety

A major concern for airport land use plans is the potential for an aircraft accident at any given location within the Plan area. An effort to apply aircraft accident probability formulas has not been attempted in this Plan because abundant and reliable national historical data identifies some areas within the Plan boundaries as more prone to aircraft accidents than other areas. For the years 1974-1981 of all recorded general aviation accidents, 47 percent occurred on airport properties and an additional 16 percent occurred within one mile of airport boundaries.[7] Further, landing accidents occurred approximately twice as often as take-off accidents.[8] In addition, a recent study for general aviation indicates that twenty-nine percent of all recorded general aviation accidents occurred within the Runway Protection Zone and primary surface area, sixty-three percent of all aviation accidents were confirmed to occur within one mile of the airport; however, accidents were split equally among take-offs and landings.[9] The conclusions of these studies confirm that land use planning should focus on lands not less than one mile from an airport.

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6 San Bernardino County General Plan Update, Background Report, Man-mad Hazards, Airport Safety Issue.

7 NTSB "Annual Review of Aircraft Accident Data – U.S. General Aviation," Calendar Years 1974-1981.

8 NTSB "Annual Review of Aircraft Accident Data – U.S. General Aviation," 1974-1989.

9 Hodges and Shutt, "Reid-Hillview Airport Land Use Safety Compatibility Study," 1991.

TABLE 2
INTERIOR/EXTERIOR NOISE LEVEL STANDARDS – MOBILE NOISE SOURCES

LAND USE		Ldn (or CNEL), dB	
Categories	**Uses**	**Interior***	**Exterior****
Residential	Single and multi-family, duplex, mobile homes	45	65**
Commercial	Hotel, motel, transient lodging	45	65***
	Commercial retail, bank, restaurant	50	n/a
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	n/a
Institutional/Public	Hospital, nursing homes, school classroom, church, library	45	65
Open Space	Park	n/a	65

* Indoor environment excluding: bathrooms, kitchens, toilets, closets and corridors.

** Outdoor environment limited to:
Private yard of single-family dwellings
Multi-family private patios or balconies
Mobile home parks
Hospital/office building patios
Park picnic areas
School playgrounds
Hotel and motel recreation areas

*** An exterior noise level of up to 65 dB (or CNEL) will be allowed since interior noise levels will be substantially mitigated through application of California Energy Commission Standards. Compliance with these standards will ensure that interior nose exposure does not exceed 45 dB Ldn (or CNEL) with windows and doors closed. According to the Acoustical and Insulating Materials Association, 45 decibels is equivalent to the level of noise in which a person with normal hearing must strain to hear a loud voice when the listener is separated from the noise source by a barrier. Requiring that windows and doors remain closed to achieve an acceptable interior noise level will necessitate the use of air conditioning or mechanical ventilation.

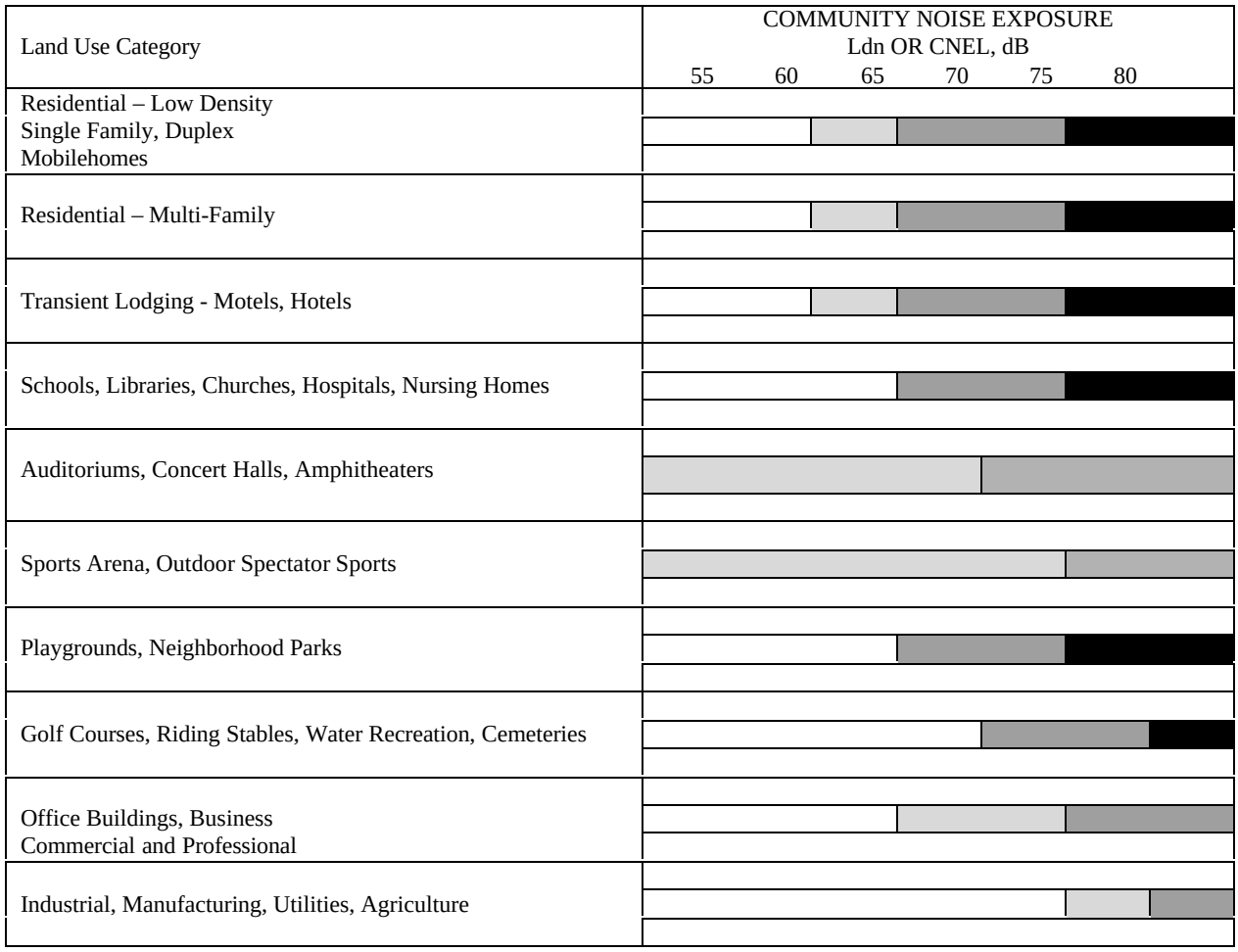
TABLE 3
NOISE EXPOSURE FOR THE GAFB REUSE – 2013

Area Within Noise Contour (Acres) Ldn Range			Approximate Population Exposed Ldn Range		
65-70	70-75	>75	65-70	70-75	>75
571	261	88	0	0	0
Source: 1991 EIS George AFB Disposal and Reuse					

FIGURE 2
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

LAND USE CATEGORIES	COMMUNITY NOISE EXPOSURE Ldn or CNEL, dB							INTERPRETATION
	55	60	65	70	75	80		
Residential - Low Density Single Family, Duplex, Mobile Homes	1	1						1 NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
		2	2	2				
					3			
						4	4	
Residential - Multi Family	1	1	1					
			2	2				
					3	3		
							4	
Transient Lodging - Motels, Hotels	1	1	1					2 CONDITIONALLY ACCEPTABLE New construction or development should be undertaken only after a detailed analysis of the nose reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
			2	2				
					3	3		
							4	
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1	1	1				
			2	2				
					3	3		
							4	
Auditoriums, Concert Hall, Amphitheaters	2	2	2	2				3 NORMALLY UNANNCEPATABLE New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
				3	3	3	3	
Sports Arenas, Outdoor Spectator Sports	2	2	2	2	2			
					3	3	3	
Playgrounds, Neighborhood Parks	1	1	1	1				
				3	3			
					4	4	4	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	1	1	1	1	1			4 CLEARLY UNACCEPTABLE New construction or development should generally not be undertaken.
					3	3		
							4	
Office Buildings, Business Commercial and Professional	1	1	1	1				
				2	2	2		
						3	3	
Industrial, Manufacturing, Utilities, Agriculture	1	1	1	1	1			Source: Guidelines for the Preparation of the Content of the Noise Element of the General Plan, 1986, Governor's Office of Planning and Research.
					2	2		
						3	3	

FIGURE 3
LAND USE COMPATIBILTIY FOR COMMUNITY NOISE ENVIRONMENTS
SCIA



INTERPRETATION

NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

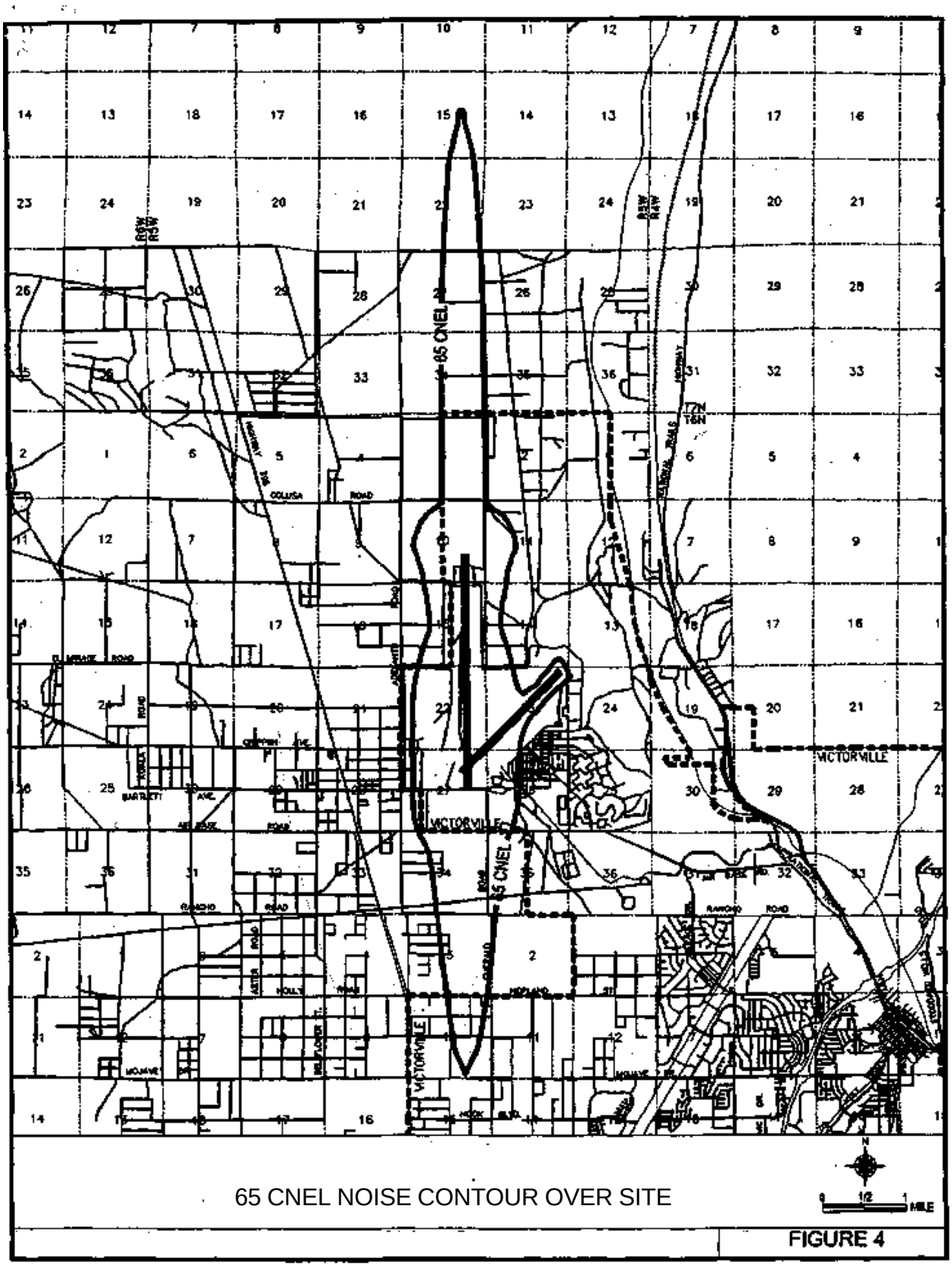
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.



65 CNEL NOISE CONTOUR OVER SITE

FIGURE 4

Protection of people and property outside the airport boundaries is most commonly accomplished by restricting population density and land uses involving critical substances or facilities under heavily used flight paths leading to and from the airport. Critical substances include, but are not limited to, flammable, volatile and/or reactive substances such as petrochemicals, poisons, and radioactive materials. Likewise, critical facilities such as fuel dispensing, chemical laboratories and industrial facilities processing hazardous products. It is assumed that the degree of hazard associated with different land uses is related to the intensity of human occupancy, and possibly with the inherent volatility associated with some uses. Consideration must be given to the potential for property damage, as well as risk caused by obstacles which might interfere with emergency landings.[10] The area outside the airport that has the highest exposure to aircraft operations is immediately off the approach/departure end of each runway. It is here that a significant number of aircraft accidents have occurred because the segment of a flight immediately after takeoff or immediately preceding landing is generally the most critical phase of flight. Therefore, special land use consideration is given to this area. The following sections discuss the two- and three-dimensional areas within which land use compatibility is focused.

2. Imaginary Surfaces

Figure 5 provides an isometric view of FAR Part 77 Civil Airport Imaginary Surfaces in a crossview depicting the vertical dimensions as well as the horizontal. Dimensions of the approach, horizontal, and transitional imaginary surfaces are determined by the length of the airport runways, airport elevations, and the most precise approach - existing or planned - for each runway end. Representations of these imaginary surfaces show the permissible height of objects and structures at different locations within the surfaces. Any object or structure which ' proposes to penetrate any of these imaginary surfaces is considered to be a hazard to air navigation, and as such, requires prior permit approval from the FAA and/or State Department of Transportation before construction can begin.[11] Map 4 of the packet included with this document and Figure 6 show these surfaces for SCIA, the dimensions of which are based on FAR Part 77 Runway Classification definitions of "precision" and "nonprecision B2 runways" f and which are described below. Table 4 indicates the dimensions and slopes for each of these surfaces based on runway classification.

A: Primary Surface. A surface longitudinally .centered on a runway 1,000 feet in width extending 200 feet .beyond each end of the paved runway.

B. Horizontal Surface. A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of a 10,000 foot radius from the center of each end of the primary surface of each runway and connecting the adjacent arcs with lines tangent to those arcs. The purpose of the horizontal surface is to extend obstruction clearance criteria outward from the approach and transitional surfaces to the base of the conical surface.

[10] San Bernardino County General Plan Update, Background Report, Man-made Hazards, Airport Safety Issue.

[11] Caltrans Division of Aeronautics, “Airport Land Use Planning Handbook,” December, 1993.

C. Conical Surface. A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

D. Approach Surface. A surface or surfaces longitudinally centered on the extended runway center line and extending outward and upward from each end of the primary surface. The approach surface provides protection to aircraft operations by establishing standards for determining obstructions in the navigable airspace. The north runway approach surface has an initial slope of 50 to 1 for a horizontal distance of 10,000 feet and a slope of 40 to 1 an additional distance of 40,000 feet. All other runway approaches have a slope of 34 to 1 for a horizontal distance of 10,000 feet with an outer width of 4,000 feet.

E. Transitional Surfaces. These surfaces extend outward and upward at right angles to the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces. The purpose of the transitional surfaces is to provide graduated obstruction clearance criteria from the primary surface to the base of the horizontal surface, thus providing aircraft with satisfactory maneuvering airspace within the immediate vicinity of the runway.

3. Object Free Areas

Protection of people and property on the airport is achieved indirectly through the application of object clearing criteria. Safe and efficient operations at an airport require that certain areas on and near the airport be clear of objects or restricted to objects with a certain function, composition, and/or height. These restrictions are intended to protect both air and ground activities and therefore are commonly located adjacent to or superimposed over taxiways, runways and thresholds. Object clearing criteria, hi effect, results hi open space in areas where accident potential is highest, ultimately providing little opportunity for people and structures to be impacted by an aviation accident. The size of these object free locations is determined by Airplane Design Group (ADG), type of operation and visibility minimums. Airplane Design Group is a grouping of airplanes into six categories based on wingspan.[12] For example, Group I is aircraft with wingspans up to but not including 49 feet; and Group II is aircraft with wingspans from 49 feet up to but not including 79 feet; etc. The SCIA will be classified as a combination "Precision/Nonprecision -B-2" airport which will serve commercial and military aircraft with wingspans exceeding 222 feet (Lockheed C-5B Galaxy). Consequently, SCIA will accommodate Group VI aircraft which have wingspans from 214 feet up to but not including 262 feet. Dimensions of the three object free areas at SCIA are listed hi Table 4 below and illustrated in Figure 7.

[12] FAA Advisory Circular 150-5300-13, September 29, 1989.

TABLE4
DIMENSIONS OF CIVIL AIRPORT IMAGINARY SURFACES (FEET)

		Part 77 Approach Surface				
Type of Runway	**Radius of Horizontal Surface**	**Slope**	**Inner Width**	**Outer Width**	**Length**	**Slope of Transitional Conical Surface**
Visual - A	5,000	20:1	250	1,250	5,000	7:1/20:1
Visual - B	5,000	20:1	500	1,500	5,000	7:1/20:1
Nonprecision - A	5,000	20:1-	500	2,000	5,000	7:1/20:1
Nonprecision - Bl	10,000	34:1	500	3,500	10,000	7:1/20:1
Nonprecision – B2 (3/21, 35)	10,000	34:1	1,000	4,000	10,000	7:1/20:1
Precision (17)	10,000	50: 1/ 40:1	l.000/ 4,000	4,000/16,000	10,000@ 50:1 then 40,000 @ 40:1	7:1/20:1

Legend
A - Utility runways
B - Larger than utility
1 - Visibility minimum greater than ¾ mile,
2 - Visibility minimum less than in ¾ mile

SCIA Classification of Runways (3/21, 17/35)

Definitions

Visual Runway - A runway intended solely for. operation of aircraft using visual approach procedures.

Utility Runway - A runway constructed 'for and intended to be used by propeller driven aircraft weighing 12,500 lbs. or less.

Nonprecision Instrument Runway – A runway having instrument approach equipment that provides horizontal course guidance or area type navigation to touchdown or a plan on file with' FAA for such installation

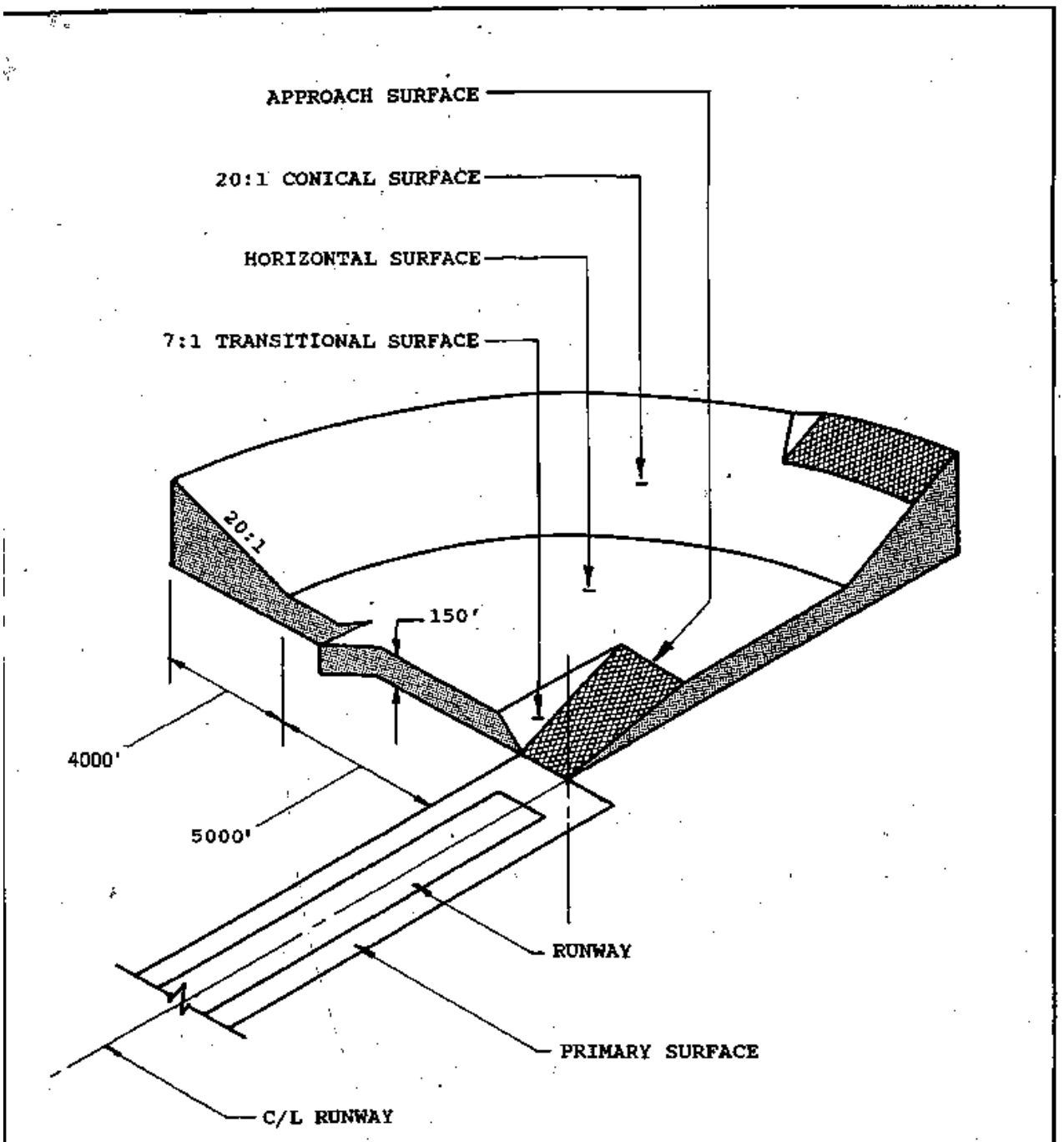
Precision Instrument Runway - A runway having an existing approach procedure utilizing an Instrument Landing' System (ELS) that provides horizontal- and vertical course guidance to touchdown or a plan on file with the' FAA for such an installation.

Source: FAA FAR Part 77 Guidelines

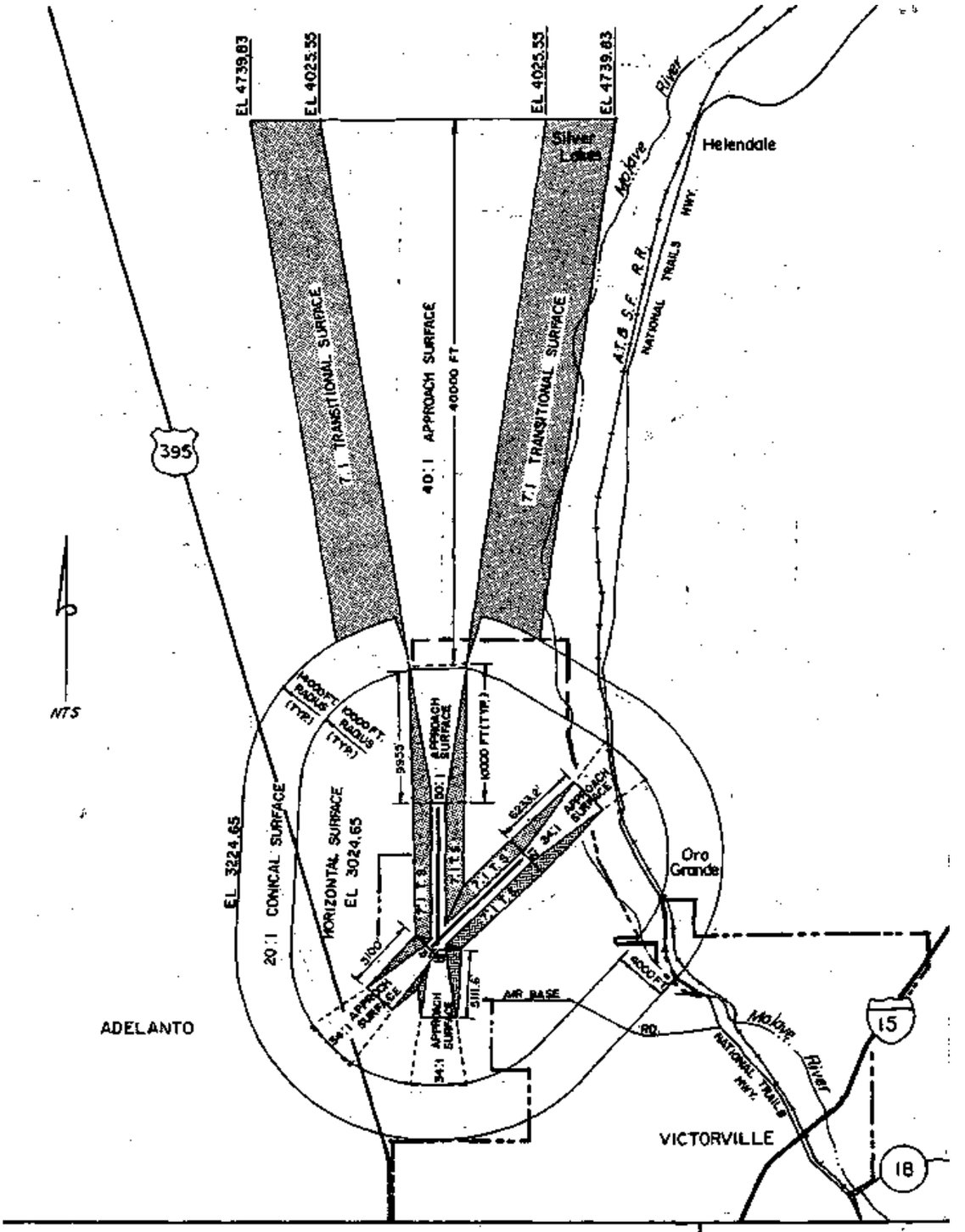
The titles and brief descriptions of the object free areas are presented below:

a. Runway Protection Zone (RPZ) - Two dimensional ground area trapezoidal in shape and centered about the extended runway center line and begins 200 feet beyond the end of the area useable for takeoff or landing. The intention of the runway protection zone is to identify and preserve an area of each runway end that has significant potential for aircraft crashes during takeoffs and landings. The RPZ dimensions are functions of the design aircraft, type of operations and visibility minimums. (Previously referred to as the Clear Zone.) SCIA has Navigational Aid (NAVAID) capability. The facility visibility minimums are visual (at both runway ends) therefore the resulting RPZ dimensions are a 1,700 to 2,500 foot length, a 1,000 foot inner width and a 1,510 to 1,750 foot outer width.[13]

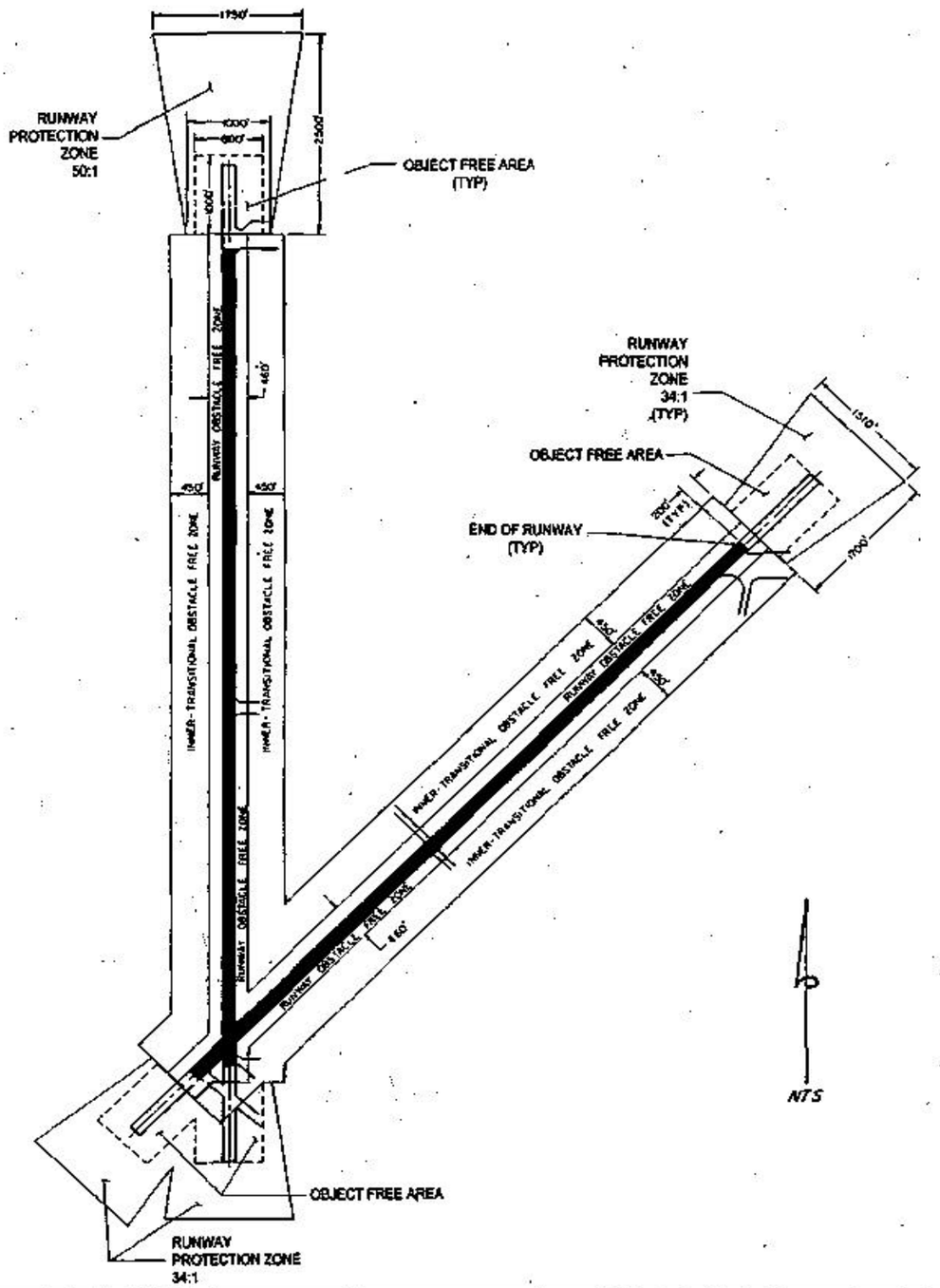
[13] FAA Advisory Circular 150-5300-13, Table 3.5.



FAR PART 77 CIVIL AIRPORT IMAGINARY SURFACES | FIGURE 5



IMAGINARY SURFACES - SCIA | FIGURE 6



OBJECT FREE AREAS | FIGURE 7

b. Runway Object Free Area (OFA) - Two dimensional ground area located within the RPZ which surrounds runways, taxiways, and taxilanes. The runway OFA clearing standard precludes parked airplanes and objects, except objects whose location is fixed by function, composition and/or height, such as wind socks, lighting and NAVAIDS. OFA dimensional standards for facilities such as SCIA are an 800 foot width and a 1,000 foot length which begins at the stopway end.[14]

c. Obstacle Free Zone (OFZ) - Three dimensional volume of airspace centered above the runway which supports the transition of ground to airborne aircraft operations and vice versa. The OFZ overlays a portion of the runway protection zone and primary surface. The purpose of the OFZ is to support the transition of ground to airborne and airborne to ground aircraft operations by establishing a clearing standard for object penetrations, except for frangible NAVAIDS whose location is fixed by function. The OFZ clearing standard also precludes taxiing and parked airplanes. For runways serving large airplanes, the dimension standards are a function of aircraft size and runway type. For SCIA the Runway OFZ extends 200 feet beyond each end of the runway and its width is 460 feet. Further, for precision instrument runways (SCIA's runway 17), an Inner-transitional OFZ extends from the outer edge of the runway OFZ at a slope of 3 to 1, terminating at a height of 150 feet above the runway elevation.[15]

Identifying the imaginary surfaces, object free areas, and safety review areas are but half the airport aviation safety, equation. Equally significant is the type of land use permitted below these surfaces and within these areas. Population densities and development activities must be such that they are not exposed to an unacceptable aviation related risk, have no potential to compromise protected airspace and do not violate object clearing criteria. The following charts reflect the suitability of a specific land use type below each imaginary surface and within each object free area. The land uses were evaluated with respect to their susceptibility to noise, as well as their acceptable level of risk from an aircraft accident. Table 5 illustrates land use compatibility beneath the airport imaginary surfaces. Table 6 illustrates land use compatibility within the object free areas.

G. Consistency with Affected Agency Land Use Regulations

Government Code Section 65302.3 requires the general plan, and any applicable specific plan to be consistent with a comprehensive airport land use plan. The following is a brief discussion of the affected agencies' current general plans and zoning regulations and their consistency with this CALUP. The zoning designations in the Planning Area are depicted on Figures 9 and 10.

1. Adelanto.

General Plan. Adelanto's General Plan designates properties within the 65 CNEL noise contour (Safety Review Area 2) as either Commercial, Light Manufacturing, Manufacturing/Industrial, Specific Plan Area, or Airport Development District (industrial/airport-related uses) and properties within the horizontal surface (Safety Review Area 3) are designated Commercial,

[14] FAA Advisory Circular 150-5300-13, Tables 3-1, 3-2.

[15] FAA Advisory Circular 150-5300-13, Chapter 3.

Commercial/Restricted, Light Manufacturing, Manufacturing/Industrial, Open Space, Public Facility, Specific Plan Area, Airport Development District, Single Family Residential, or Medium Density Residential. Given their location around the airport, these land uses are conditionally acceptable or normally acceptable by Caltrans or FAA Guidelines with the exception of professional and business commercial office buildings which are designated normally unacceptable within the 65 CNEL noise contour. These uses may be allowed in the Commercial and Commercial Restricted districts. Further, the Medium Density Residential designation provides for a maximum density of eight dwelling units per acre, which is inconsistent with the six dwelling unit per acre density limitation within Safety Review Area 3. Policies and implementation strategies in this General Plan support the development of a "major airport facility" and stipulate that specific land uses are not to interfere with any long-range master plan for George AFB uses. No specific measures for implementing such support are known at this tune; however, processes, if not existent, will need to be established after adoption of this CALUP.

Zoning. Adelanto's zoning designations of property within Safety Review Area 2 include C (Commercial), CR-2 (Card Room), LM (Light Manufacturing), MI (Manufacturing/Industrial) and ADD (Airport Development District) and properties within Safety Review Area 3 are designated R-l (Single Family Residential), MHP (Mobile Home Park), R-3 (Multiple Family Residential), C (Commercial), CR (Commercial Restricted), CR-2 (Card Room), LM (Light Manufacturing), MI (Manufacturing/Industrial), OS (Open Space/Public land/School), and ADD (Airport Development District). The zoning districts' compatibility with this CALUP include the same comments as noted hi the General Plan discussion, above. In addition, development standards of the individual zone districts will need to be established or modified in order to. meet the FAR Part 77 height restrictions as well as Uniform Building Code regulations for noise attenuation within certain structures. Further, use of certain building materials are not currently prohibited and performance standards are not established to ensure operational compatibility of uses hi Adelanto with SCIA. This includes assembly limits for non-residential uses in Safety Area 2.

2. Victorville.

General Plan. Victorville's General Plan designates property within Safety Review Areas 1 and 2 as Specific Plan under its Southern California International Airport Specific Plan, Light Industrial and Very Low Density Residential. The Specific Plan designation allows for commercial, industrial, open space, and airport and support facilities activities. Within Safety Review Area 1, the open space and airport and support facilities designations of the specific plan which allow runways, safety clear areas and navigational aids as well as agricultural uses (garden, orchard, and field crops) as permitted hi the Very Low Density Residential land use designation are consistent with uses allowed within Safety Review Area 1. However, other structural development is incompatible with this Safety Review Area. Properties within Safety Review Area 3 are also designated Specific Plan, which allows commercial, industrial, residential, and open space uses, Light Industrial, Very Low Density Residential, Rural Residential, and Open Space. These land uses are categorized as either normally acceptable or clearly acceptable within Safety Review Area 3.

Goals, policies, objectives and/or programs, such as site plan or other discretionary actions, exist hi Victorville which provide mechanisms for the review of new development on affected

properties. This will ensure compatibility is continued during the development and operation of SCIA.

Zoning. Victorville's zoning .designation within Safety Review Area 1 is Specific Plan and R-1TB5 (Single Family Residential - Transitional with a minimum building site of five acres). The open space and airport and support facilities designation of the specific plan which allow runways, safety clear areas and navigational aids and the agricultural uses (garden, orchard, and field crops) as permitted, in the R-1TB5 zone district are consistent with the uses allowed within Safety Review Area 1. However, other structural development is incompatible with this Safety Review Area. Safety Review Area 2 contains property zoned as Specific Plan, R-1TB5, and M-IT (Light Industrial - Transitional). Uses allowed within these zone districts are .generally classified as conditionally acceptable. Safety Review Area 3 contains property zoned AE (Exclusive Agriculture) and AE-T (Exclusive Agriculture - Transitional), A-EB10 (Exclusive Agriculture with a minimum lot size of ten acres, FP (Flood Plain), and R-1TB5. Uses allowed within these zone districts are classified as clearly acceptable, normally acceptable, and conditionally acceptable. Development standards within these zone districts will need modification to be, consistent with Safety Review Area 1 and 2 restrictions on building height and/or use. Further, operational standards similar to those noted for Adelanto's zoning regulations will need to be established hi order to be consistent with this CALUP.

3. San Bernardino County

General Plan. San Bernardino County's General Plan designates property within Safety Review Areas 2 and 3 as Rural Living, Agriculture, Industrial, Commercial and Floodway. These land uses are designated conditionally acceptable or normally acceptable. San Bernardino County has established procedures requiring review of affected property in the past by the ALUC. It is anticipated that this practice/ will be continued with the development of SCIA.

Zoning. San Bernardino County's Zoning designations within Safety Review Areas 2 and 3 are RL-5 (Rural Living with a minimum five acre lot size), RS-10 (Single Family Residential with a minimum ten acre lot size), AG (Agriculture), IR (Regional Industrial), CN (Neighborhood Commercial), and FW (Floodway) which are classified as either conditionally acceptable or normally acceptable land uses. However development standards related to structure height and noise attenuation may need to be established to ensure compatibility with this CALUP.

TABLE 5

LAND USE COMPATIBILITY - IMAGINARY SURFACES

Land Use Category	Approach	Transitional	Horizontal
Residential - Single Family, Duplex, Mobilehome	NU[1]	CA[2]	NA
Residential - Multi-Family	NU	CA	NA[3]
Transient Lodging - Motels, Hotels	NU	CA	NA
Schools, Libraries, Churches, Hospitals, Nursing Homes	NU	NU	CA
Auditoriums, Concert Halls, Amphitheaters	NU	CA[3]	NA
Sports Arenas, Outdoor Spectator Sports	NU	CA[3]	NA
Playgrounds, Neighborhood Parks	NU	CA[3]	NA
Golf Courses, Riding Stables, Water Recreation, Cemetery	NA[4]	NA[3]	CLA
Office Buildings, Business Commercial, Professional	NU	CA	NA
Manufacturing, Transportation Services, Contract Construction	NU[4]	CA	NA
Wholesale /Warehouse Operations, Salvage Operations	NU[4]	CA	NA
Utilities	NU[4]	CA	NA
Agriculture	NA	NA	CLA
Livestock, Animal Breeding	NA	NA	NA
Retail Trade/Commercial Services	NU	CA	NA

Density Criteria

Maximum Gross Density (dwelling units per acre)	.5	1	6
Maximum Assembly (persons per acre)	60	100	No Limit

Clearly Unacceptable (CLU): New construction/development should not occur. Existing uses should be relocated.
Normally Unacceptable (NU): New construction/development should not occur.
Conditionally Acceptable (CA): New construction/development may be permitted. Community character and/or unique development patterns may justify
approval. Uses subject to restrictions and mitigation for purposes of public safety.
Normally Acceptable (NA): New construction/development permitted. Uses subject to restrictions and mitigation for purposes of public safety.
Clearly Acceptable (CLA): New construction/development permitted. No public safety restrictions envisioned.

1 Residential development underneath airport VFR traffic patterns shall be discouraged. If development occurs, maximum density shall be limited to one dwelling unit per two acres.
2 Residential development underneath airport VFR traffic patterns shall be discouraged. If development occurs, maximum density shall be limited to one dwelling per acre.
3 Land uses satisfying density criteria is acceptable.
4 Land uses satisfying density criteria may be acceptable.

Source: FAA FAR Part 77 Guidelines.
Caltrans, Airport Land Use Planning Handbook, 1993, Chapter 3 and 9.
San Bernardino County Planning Department, Airport Comprehensive Land Use Plan, Yucca Valley Airport, February, 1992.

TABLE 6

LAND USE COMPATIBILITY - OBJECT FREE AREAS

Land Use Category	Runway Protection Zone	Runway Object Free Area	Obstacle Free Zone
Residential -Single Family, Duplex, Mobilehome	CLU	CLU	CLU
Residential - Multi-Family	CLU	CLU	CLU
Transient Lodging -Motels, Hotels	CLU	CLU	CLU
Schools, Libraries, Churches, Hospitals, Nursing Homes	CLU	CLU	CLU
Auditoriums, Concert Halls, Amphitheaters	CLU	CLU	CLU
Sports Arenas, Outdoor Spectator Sports	CLU	CLU	CLU
Playgrounds, Neighborhood Parks	CLU	CLU	CLU
Golf Courses, Riding Stables, Water Recreation, Cemetery	CLU	CLU	CLU
Office-Buildings, Business Commercial, Professional	CLU	CLU	CLU
Manufacturing, Transportation Services, Contract Construction	CLU	CLU	CLU
Wholesale/Warehouse Operations, Salvage Operations	CLU	CLU	CLU
Utilities	CLU	CLU	CLU
Agriculture	NA[1]	NU	CLU
Livestock, Animal Breeding	CLU	NU	CLU
Retail Trade/Commercial Services	CLU	CLU	CLU

Density Criteria

Maximum Gross Density (dwelling units per acre)	0	0	0
Maximum Assembly (persons per acre)	10	0	0

Clearly Unacceptable (CLU): New construction/development should not occur. Existing uses should be relocated.

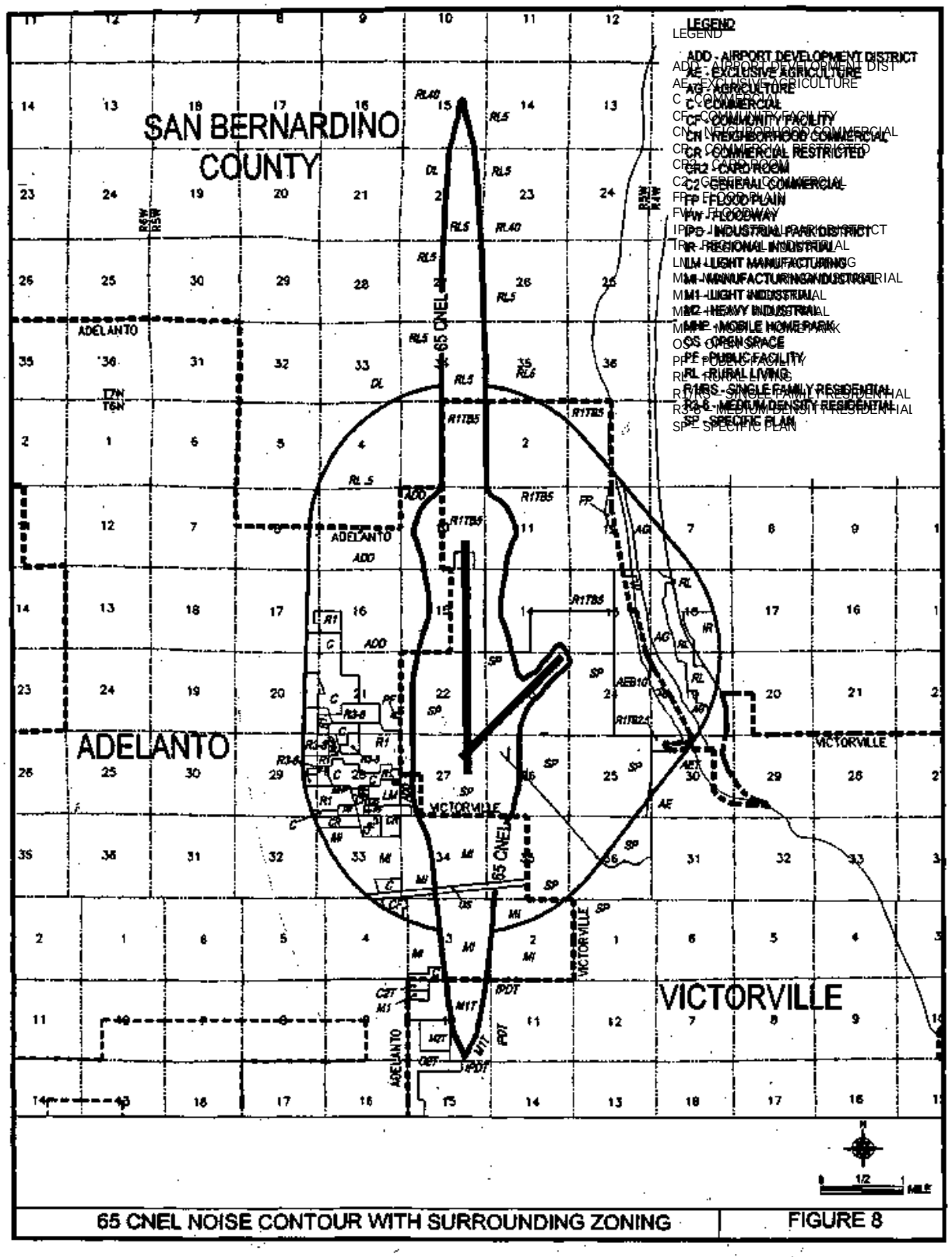
Normally Unacceptable (NU): New construction/development should not occur.

Normally Acceptable (NA): New construction/development permitted. Uses subject to restrictions and mitigation for purposes of public safely.

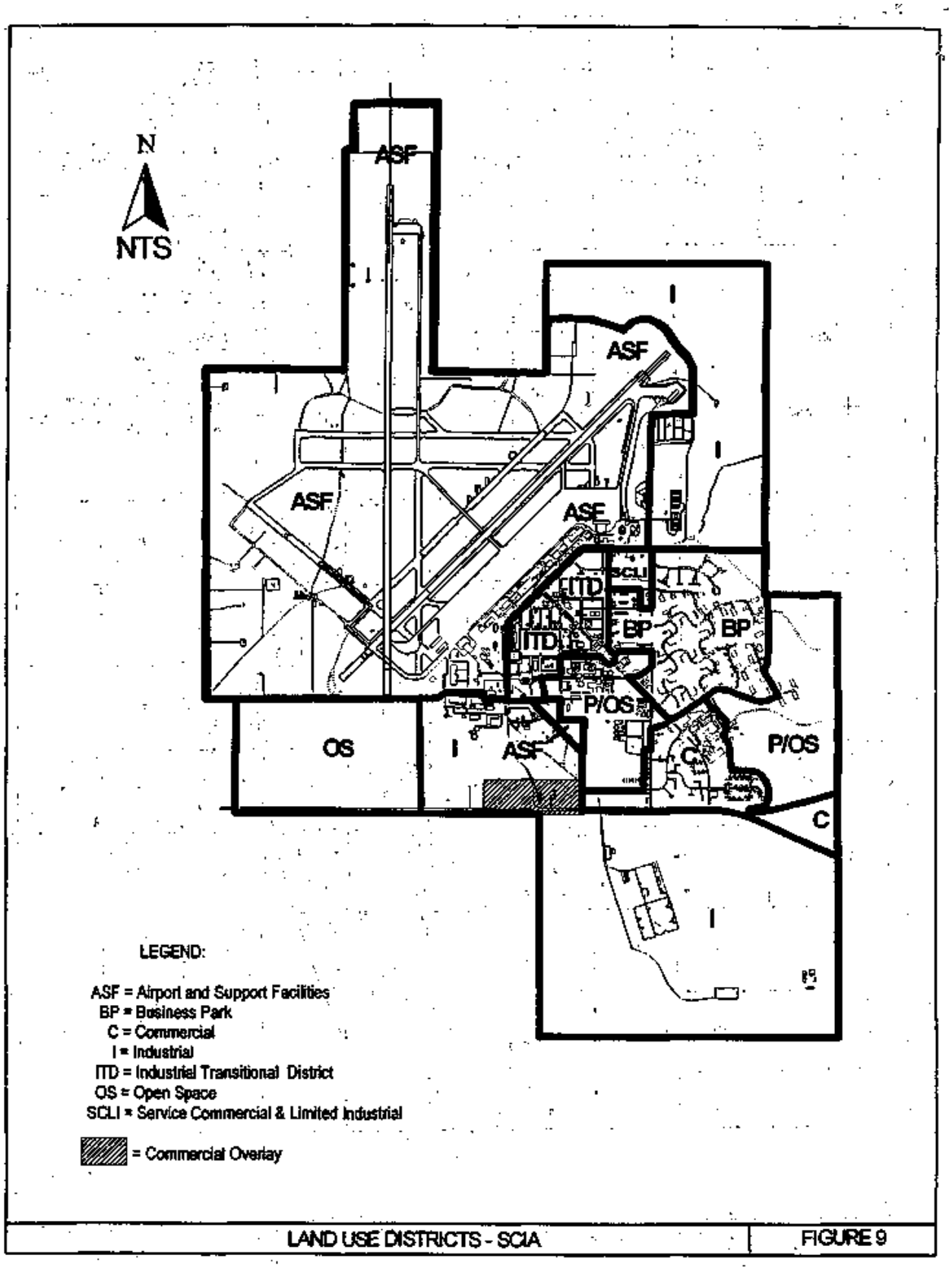
Clearly Acceptable (CLA): New construction/development permitted. No public safety restrictions envisioned:

[1] Agricultural land uses are considered acceptable provided no structures are proposed/developed.

Source: Caltrans, Airport Land Use Planning Handbook, 1993, Chapter 3 and 9.
San Bernardino County Planning Department, Airport Comprehensive Land Use Plan, Yucca Valley Airport, February, 1992.



65 CNEL NOISE CONTOUR WITH SURROUNDING ZONING | FIGURE 8



LAND USE DISTRICTS - SCIA | FIGURE 9

II. SCIA CALUP REGULATIONS

A. Planning Area Boundary - Basis

A major consideration in developing a CALUP is determining the size and limits of the area to which it is to be applied. A variety of methods have been used to define planning boundaries, the most common of which are:

* Location and configuration of the airport included in the plan.

* Major transportation facilities and geographic features that include, as a minimum, the noise and safety impact areas.

* The extent of the noise and safety impacts associated with the airport based on existing or projected noise contours, and airport operations.[16]

For the most part, the horizontal surface was selected for SCIA because it: (1) Reflects anticipated aircraft operations and impacts both in the air and on the ground extending outward approximately two miles from the runways, which is consistent with FAR Part 77 airspace criteria for designating the boundary[17]; and (2) Utilizes finite horizontal and vertical limits established by FAA regulations with which to determine compatibility of structures and their height on airport operations. An exception to this boundary involves an area at the end of runway 3 in the northeast portion of the Planning Area. This small portion of the 65 CNEL noise contour which extends beyond the horizontal surface was included because it allows land uses to be evaluated based on their exposure to noise levels which exceed State standards (65 CNEL).

Consequently, based upon the above, the established plan area provides an adequate review area for ensuring land use compatibility with SCIA. Consistent with Public Utilities Code § 21675(c), this plan area is depicted on Figure 11.

B. Application

Only one CALUP shall be effective for SCIA which is to be adopted by each affected agency. Once this CALUP is adopted by each affected agency, all projects within the planning area boundaries shall be reviewed for consistency with this Plan by the affected agency (and referred to the SCIA operator).

The principle land use planning goals for this CALUP is to minimize potential harm to people and property, to protect aircraft operations, and to provide for the viability of the airport. These objectives are generally accomplished by selecting proper land uses and intensities hi the areas with the highest potential to be affected by aircraft operations or aircraft accidents.

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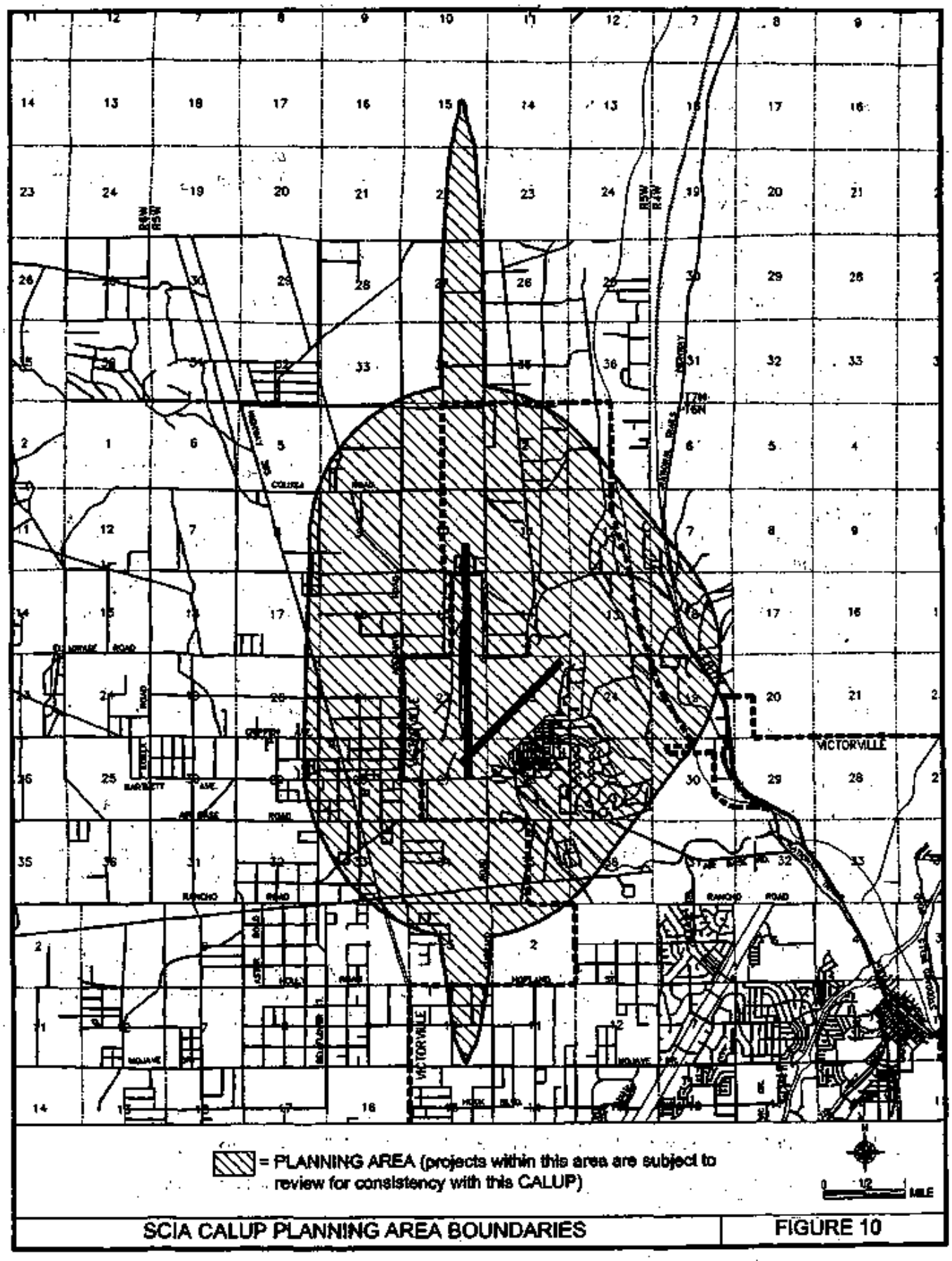
16 California Division of Aeronautics, "Airport Land Use Planning Handbook," December, 1993, Chapter 1.

17 California Division of Aeronautics, "Airport Land Use Planning Handbook," December, 1993, Chapter 3.



SCIA CALUP PLANNING AREA BOUNDARIES | FIGURE 10

C. Safety Review Areas

As previously noted in Section IF(1), aircraft accidents occur most often on airport property. Further, the accident rate in the traffic pattern or within a mile of the airport also accounts for a substantial portion of total accidents. This data explains that people and property on the airport and within its environs are exposed to varying levels of aviation related hazards of risks associated with the aviation industry. The degree of risk or level of exposure is reflected in the creation of three safety review areas within the SCIA CALUP Planning Area. The areas are depicted on Figure 11, defined and discussed below, and illustrated for land use compatibility determinations on Table 7.

The land use compatibility chart for the safety review areas is derived from the data reflected in the Object Free Area Compatibility Chart (Table 6), the Airport Imaginary Surfaces Compatibility Chart (Table 5) and the Land Use Compatibility for Community Noise Environments - SCIA Chart (Figure 3). Compatibility was determined through a repetitive, discretionary process of classifying a project in a land use category, locating the selected land use on the Object Free Area, Imaginary Surface and/or Community Noise Compatibility charts, noting the acceptability of the use in each area and/or surface, and determining the suitability in the respective safety review area. As an example, the following process was used to determine the compatibility of riding stables in Safety Review Area 1. First, the selected land use (riding stables) was located on the Object Free Area Compatibility chart. The review proceeded horizontally to the Runway Protection Zone and Runway Object Free Area columns (both areas are within this safety review area). Each object free area reflected that this land use is clearly unacceptable. Second, the selected land use was located on the Imaginary Surfaces Compatibility chart. The review proceeded horizontally to the Approach Surface column (the inner 1,000 feet of this imaginary surface is layered over the Runway Object Free Area and the Runway Protection Zone). The imaginary surface chart reflected that this land use is normally acceptable. Since[1] these object free areas and the imaginary surface are layered over the same area, the conclusion was that the more restrictive compatibility should prevail and therefore, without introducing the noise compatibility issue this land use is classified as clearly unacceptable for Safety Review Area 1.

As a method of identifying support for the goals of the plan, land uses within the planning area are categorized as compatible or non-compatible. Compatible uses are those which have little or no consequence on aircraft operations, those which have densities or uses such that the risk of an aircraft accident is proportional to the effect an aircraft accident will have on people or property, and those Which are not adversely affected by aviation produced noise. Noh-compatible uses are those not qualifying as a compatible use and can be considered a potential threat to the airport, its aircraft or. to itself. Consistent with Federal Aviation Administration data on accident potential and aircraft safety, non-compatible uses in Safety Review Areas 1 and 2 may result in serious .adverse effects to operations of the airport;

a. Safety Review Area 1 - Safety Review Area 1 is designed to provide protection to people and property on the ground and to provide protection to airborne aircraft since it has the highest exposure to aircraft operations and therefore the highest potential to be impacted by aviation-related hazards. The area is centered on each runway at a width of 1,000 feet and extends past each end of the runways, extending outward horizontally 1,700 feet and 2,500 feet. Within the area are the three object free areas (runway protection zone, object free

area, and obstacle free zone) and two FAR Part 77 imaginary surfaces (primary surface and approach surface) layered one upon the other. .

Safety Review Area 1 overlays two land use districts at the approach end of the runways [Specific Plan and R-1TB5 (Single Family Residential - Transitional with a minimum building site of five acres)] and overlays a mixture of commercial, industrial and open space ; zone districts at the other end of the runways. While it is desirable to clear all objects and land uses from Safety Review Area 1, agricultural operations, provided they do not propose structures or attract birds are normally acceptable in me approach surface and runway protection zone. Land uses that prohibit occupancy or the encroachment Of any structure are clearly acceptable in Safety Review Area 1. Further, taxiways and similar aviation related 1 facilities are also allowed provided certain airspace-encroachments are restricted adjacent to the runways. Consequently, Table 7 within Safety Review Area I are conditionally compatible with airport operations.

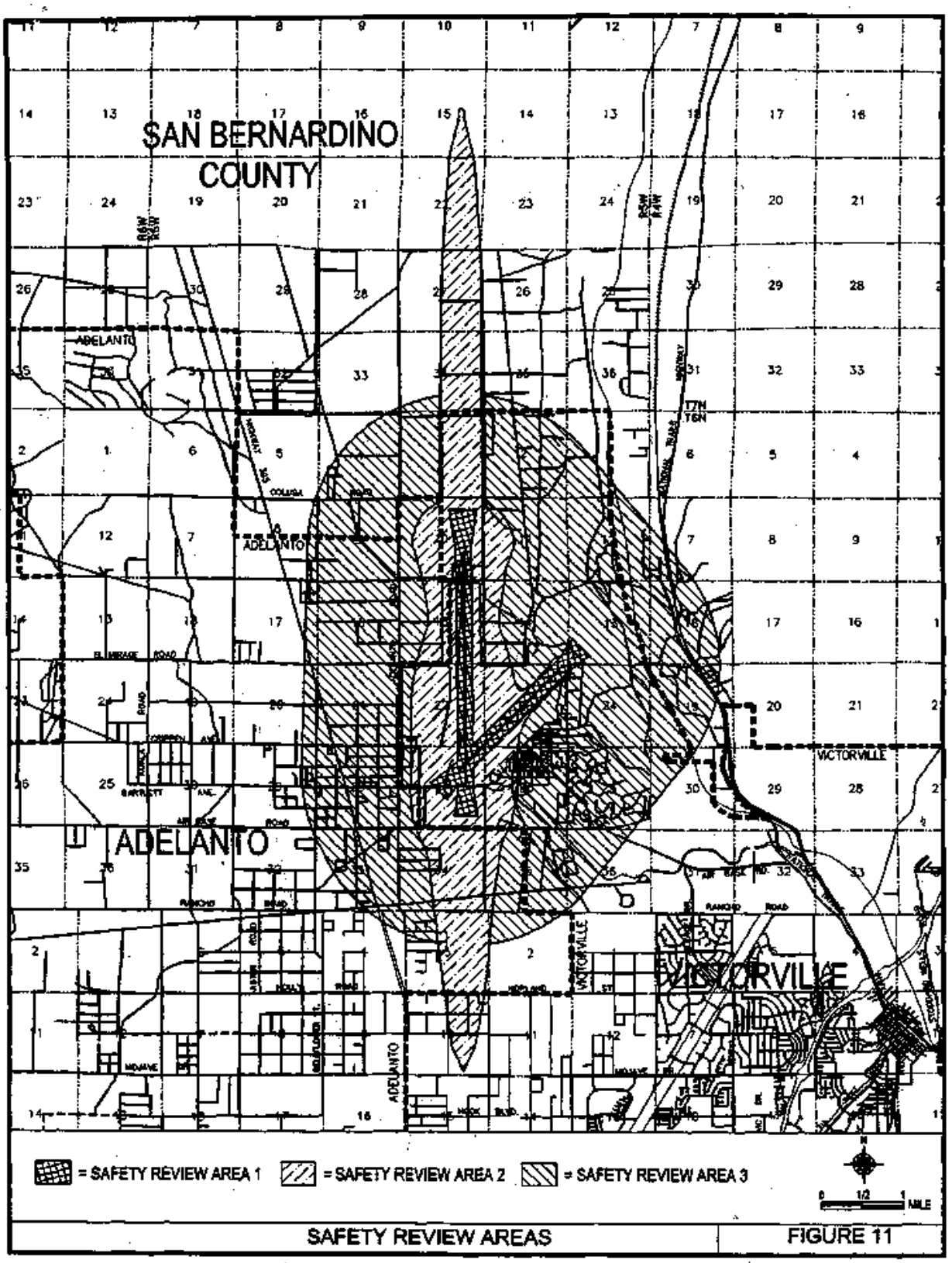
No structural development, other than NAVAIDS, has occurred in Safety Review Area 1.

b. Safety Review Area 2 - Safety Review Area'2 also furnishes protection to both people on the ground and to aircraft operations. The area is centered over the runway, overlays but excludes the territory within Safety Area 1, and extends outward and corresponds with the 65 CNEL (Community Noise Equivalency Level) noise contour. In addition to the 65 CNEL noise contour, a portion of three imaginary surfaces (approach, transitional and horizontal surfaces), and a single object free area [inner-transitional obstacle free zone (OFZ)], lie within the safety review area

   Safety Review Area 2 consists primarily of industrial and commercial land use districts. The purpose of these land use districts is to allow existing lands and structures committed to aviation support facilities and to public heeds. Some rural residential and very low density residential land use designations, exist hi the north and northeasterly portion of the area which allow residences at a density of one unit per five acres. Consequently, the existing land districts are compatible with the aviation activity of the airport. Existing development within Safety Review Area 2 includes airport runways, taxiways, NAVAIDS, aviation and industrial uses and commercial uses. These uses are compatible with aircraft operations.

c. Safety Review Area 3 - Safety Review Area 3, coterminous with the perimeter established for the imaginary horizontal surface, provides protection to people, property and aircraft on the ground and in the air. The area is centered over the runways, extending outward hi all directions with a 10,000 foot arc from the center of each end of the primary surface of each runway arid connecting the adjacent arcs of lines tangent to those arcs and excludes the areas within Safety areas 1 and 2. Within this safety review area are three airport imaginary surfaces - the transitional surfaces, the horizontal surface, and the approach surfaces.

   Safety Review Area 3 reflects reduced exposure to aircraft operations and aviation hazards from Safety -Review Areas 1 or 2. Because it has the lowest exposure to aircraft operations, the frequency of accidents are relatively low within this area. This Safety Area is sometimes called the Traffic Pattern Zone. Only when the density of use exceeds 100 people per acre


SAN BERNARDINO
COUNTY
ADELANTO
VICTORVILLE
= SAFETY REVIEW AREA 1
= SAFETY REVIEW AREA 2
= SAFETY REVIEW AREA 3
0 1/2 1 MILE
SAFETY REVIEW AREAS
FIGURE 11

within the approach surfaces, would a use be considered unacceptable.[18] The land use districts within this area are residential, various types of commercial, and small pockets of industrial, institutional and open space. Two areas within this safety, review area that require special consideration are beneath the extension of the approach surface (outer 4,000 feet) and beneath the adjoining transitional surfaces. Land use districts below the approach surface to runways are a mixture of commercial, industrial and rural residential. Land use districts under the transitional surfaces are rural residential, various types of commercial, institutional, and industrial.

The compatibility of these land uses depends upon their location within the safety review area. All the land use districts within Safety Review Area 3, excluding those beneath the outer segment of the approach surface and those beneath the transitional surfaces, are compatible with the airport's activities. The open space district and certain uses permitted by the industrial district that comply with the density criteria may be compatible, within the approach and transitional sectors of the plan. The residential, commercial and institutional land use districts below the transitional surfaces are considered to be conditionally compatible with airport operations provided .certain operational, or development standards are met. Additionally, uses permitted by the industrial district that comply with the density criteria may be compatible within this plan area.

Several different types of development in the Plan area exist beneath Safety Review Area 3. This includes single family dwelling units, multiple family dwelling units, and a myriad of commercial uses which include professional services, retail trade/personal services, lodging services, recreational/entertainment services, repair services, convenient/support services, open lot services, contract/construction services and, wholesale/warehouse operations. These uses are located such that they are compatible with airport operations. However, a number, of uses below the approach surface (outer 4,000 feet) and below the transitional surfaces are either not compatible or conditionally compatible with the aircraft activities of this airport.

D. Project Review Criteria/Agency Responsibilities

Generally, airports do not own or control all the land necessary to ensure the safety of their operations and/or people and property on the ground. Consequently, CALUPs are prepared to provide for the orderly growth of a public use airport and to provide for the general health, safety and welfare of the public. Land use planning law provides local jurisdictions the opportunity to examine projects within CALUP areas for consistency with said plan,, and to apply development standards where necessary to achieve Plan objectives. Further, State law requires that processes be established for notification of the general public, landowners, interest groups, and other public agencies regarding preparation, adoption, and amendment of CALUPs. Therefore, consistent with the foregoing, the following criteria and/or requirements are hereby established in order to implement the provisions of this Plan:

[18] California Department of Transportation Division of Aeronautics, “Airport Land Use Planning Handbook,” December, 1993.

TABLE 7
LAND USE COMPATIBILITY - AIRPORT SAFETY REVIEW AREAS

Land Use Category	Safety Review Area 1	Safety Review Area 2	Safety Review Area 3
Residential - Single Family, Duplex, Mobilehome	CLU	CA[1]	NA[3]
Residential - Multi-Family	CLU	NU	NA[3]
Transient Lodging - Motels, Hotels	CLU	NU[4]	NA[2]
Schools, Libraries, Churches, Hospitals, Nursing Homes	CLU	NU[2]	CA[2]
Auditoriums, Concert Halls, Amphitheaters	CLU	CLU	NA[2]
Sports Arenas, Outdoor Spectator Sports	CLU	CLU	NA[2]
Playgrounds, Neighborhood Parks	CLU	CA[2,4]	NA[2]
Golf Courses, Riding Stables, Water Recreation, Cemetery	CLU	CA[2,4]	CLA
Office Buildings, Business Commercial, Professional	CLU	CA[2,4]	NA[2]
Manufacturing, Transportation Services, Contract Construction	CLU	CA[2,4]	NA[2]
Wholesale/Warehouse Operations, Salvage Operations	CLU	CA[2,4]	NA[2]
Utilities	CLU	NU	NA[2]
Agriculture	NA[2]	NA[2]	CLA
Livestock, Animal Breeding	NU	NA[2]	NA[2]
Retail Trade/Commercial Services	CLU	CA[2,4]	NA[2]

Density Criteria

Maximum Gross Density (dwelling units/acre)	0	.5	6
Maximum Assembly (persons per acre)	10	100	No Limit[3]

Clearly Unacceptable (CLU): New construction/development should not occur. Existing uses should be relocated.
Normally Unacceptable (NU): New construction/development should not occur.
Conditionally Acceptable (CA): New construction/development may be permitted. Community character and/or unique development patterns may justify
approval. Uses subject to restrictions and mitigation for purposes of public safety.
Normally Acceptable (NA): New construction/development permitted. Uses subject to restrictions and mitigation for purposes of public safety.
Clearly Acceptable (CLA): New construction/development permitted. No public safety restrictions envisioned.

1 Residential development underneath airport VFR traffic patterns including approach surfaces shall be discouraged. If development occurs, maximum density shall be one dwelling unit per 2 acres, and noise attenuation at or below 45 dB shall be required within habitable structures.

2 Land uses are considered acceptable provided no structures are proposed/developed or if structures are in locations outside approach surfaces, and are conditionally acceptable if located within transitional surfaces. The development of schools, libraries, churches, hospitals and nursing homes below the transitional surfaces is normally unacceptable.

1 Residential development outside approach surfaces shall not exceed 6 dwelling units per acre; residential development within approach surfaces shall, not exceed 1 dwelling unit per 2 acres.

4 Land uses satisfying density criteria may be acceptable.

5 Non-residential land uses within approach surfaces shall not exceed 100 persons per acre.

Source: FAA FAR Part 77 Guidelines.
Caltrans, Airport Land Use Planning Handbook, December 1993, Chapter 9.

1. Local Jurisdiction Responsibilities.

a. Within 180 days of, adoption of this plan by each affected agency, each local jurisdiction subject to this CALUP shall amend its general plan and any other land use controls and regulations, where necessary, to be consistent with this CALUP. Said regulations shall include provision of public hearings for projects within Safety Review Areas 1, 2 and 3.

b. All new projects proposed within the Planning Area boundaries of this CALUP shall be reviewed for consistency utilizing the Safety Review Area. Compatibility Chart (Table *7),* and if necessary due to building height, the Imaginary Surface and Object Free Area criteria (Sections I.F.2. and I.F.3.). The following information is provided as a guide to local jurisdictions in their review of projects.

1) Projects within Safety Review Area 1: Any structural development will require permits by either California Department of Transportation Aeronautics Program, or the Federal Aviation Administration, which will not approve any projects that do riot comply with FAR Part 11 regulations, and therefore, would not be consistent with this CALUP.

2) Projects within Safety Review Area 2: Structures which do not exceed thirty-eight feet in height when measured from the runway elevation (2,874.65 feet ASL) are automatically consistent. Structures exceeding thirty-eight feet in height may also be consistent based upon their location within imaginary surfaces (horizontal approach) and/or object free areas. Land uses within said structures are reviewed in accordance with b., above.

3) Projects within Safety Review Area 3: Structures which do not exceed fifty feet in height when measured from the runway elevation are automatically consistent. Structures exceeding fifty feet but less than one hundred fifty feet in height may also be consistent based upon their, location within the imaginary surfaces (horizontal and approach). Land uses within said structures are reviewed in accordance with b., above.

All projects subject to this section shall be referred to all affected agencies, as well as the SCIA owner/operator,

.

Projects that are determined to be consistent with the CALUP by the permitting local jurisdiction do not need to be reviewed by other affected agencies (the County of San Bernardino and the City of Adelanto), and if a dispute arises, the designated Mediator (the Airport Mediation Board), will process the project consistent with the Mediation Procedures contained in Section II.E.

c. In addition to b. above, all proposed projects within Safety Areas 2 and 3 of the CALUP area, whether reviewed by local jurisdictions or all affected agencies, are subject to the following development standards:

1) The proposed structures and the normal mature height of any vegetation shall not exceed the height limitations provided by Federal Aviation Regulations, PART 77, Objects Affecting Navigable Airspace.

2) Development of residential or other noise sensitive land uses shall require interior noise exposure levels of 45 CNEL or less with windows and doors closed. Noise sensitive land uses include residential uses, schools, hospitals, nursing homes, churches and libraries. Interior noise exposure levels for retail commercial, banks and restaurants shall be 50 CNEL or less, and industrial uses shall be 55 CNEL or less.

3) The proposed use or structure shall not reflect glare, emit electronic interference or produce smoke that would endanger aircraft operations.

4) The proposed use does not involve the storage or dispensing of volatile or otherwise hazardous substances that would endanger aircraft operations.

5) The proposed use or structure complies with the applicable San Bernardino County, Victorville or Adelanto Development Code Standards specified by each official land use district.

6) The short or long term concentration of people at a proposed use or within a structure shall not exceed the maximum gross density or maximum assembly limits specified by the density criteria of the land use compatibility in the Safety Review Area chart. Further, residential densities shall not exceed one dwelling unit per gross acre within the 65 CNEL noise contour (Safety Review Area 2).

7) The proposed use or structure shall not attract large concentrations of birds (i.e., landfills, water bodies, aviaries).

8) Any development shall require the recordation of a noise and avigation easement for the benefit of SCIA or SCIA and the jurisdiction approving the development prior to the final approval and recordation of any tentative map or the issuance of any building permits for development of the subject property.

d. If an existing structure or building exceeds height requirements or density limitations, creates glare due to the building materials used, or is otherwise inconsistent with the development standards hi subsection C., above, it shall be deemed non-conforming and incompatible and subject to the following regulations.

1) Existing, non-residential incompatible buildings and structures may be continued and maintained, provided there are no structural alterations or expansion unless the building is brought into conformity with the CALUP. Changes or modifications to these non-residential incompatible uses shall be considered a new project for purposes of review under this CALUP, and such changes or modifications may be approved provided all of the following findings can be satisfied:

a) The proposed alteration shall not prolong the existing incompatible use beyond any adopted abatement schedule or the expiration of any conditional use permit approval.

b) The alteration of the existing incompatible use shall not be detrimental to nor prevent the attainment of objectives, policies, general land use and programs

specified, in the applicable San Bernardino County, Victorville, or Adelanto General Plan and this CALUP.

c) The alteration to the incompatible use shall not be detrimental to the public health, safety or welfare, or harmful to the property or improvements in the vicinity and district in which the use is located.

d) The alteration shall not interfere with operation of the airport, and the applicant/operator of the use shall agree to hold the airport operator harmless from any claims, damages, or impacts associated with air facility operations.

Failure of the jurisdiction to make all of the findings shall require the proposed change or modification to be reviewed by all affected agencies. The local jurisdiction shall not approve such change or modification unless all affected agencies approve the project, or the local jurisdiction files for Mediation hi accordance with Section E.

The provisions of this Plan shall not prevent the reconstruction, repairing or rebuilding and continued use of any incompatible building or buildings damaged by any natural or man-made catastrophe subsequent to the adoption date of this plan, wherein the cost of such reconstruction, repairing or. rebuilding does'" not' exceed a percentage of the reasonable value of such building or buildings constituting a single enterprise at the time such damage occurred. Such reasonable value shall be determined by the local jurisdiction in which the reconstruction, repairing or rebuilding is proposed to occur. The current percentages are as follows: City of Adelanto - 50%, City of Victorville - 50%; County of San Bernardino - 75%.

2) Recognizing that this Plan is directed towards the protection of areas around airports to the extent such areas are not already devoted to incompatible uses and recognizing that residential development in areas previously 'subdivided for such use is ministerial, this CALUP exempts existing residential structures, and/or residentially developed land existing at the tune of Plan adoption from the provisions of incompatibility. However, it is inconsistent with this Plan to allow any further subdividing of property within the residential land use districts below either the approach or transitional surfaces or allow residential development which will result in a density beyond that which is allowed by the respective Safety Review Area. Additionally, the infill area should be bounded by uses similar to those proposed and should not increase the perimeter of the area already developed with incompatible uses. Further, increases in the intensity and/or incompatibility of use through conditional use permits, density transfers or other strategies shall be avoided.

2. Affected Agency Responsibility

The following projects shall require amendment to this CALUP before project approval by the local jurisdiction having permit authority over the project, subject to review and approval by all affected agencies. All projects subject to this section shall also be referred to the SCIA owner/operator for review:

a. Any projects that are determined by the local jurisdiction not to be appropriate for the safety review area, judged on its impact to the airport and aviation activities, compliance with local ordinances and compliance with the development standards of this CALUP. Projects that are inconsistent with this CALUP shall require review by all affected agencies and potentially amendment to this CALUP before project approval.

b. All proposed amendments to the text or maps of the San Bernardino County, Victorville or Adelanto General Plan, Development Code or any Specific Plan which affects any territory. within the planning area, or changes in the existing permitted land use or building standards within the Planning Area.

All projects subject to review an approval by all affected agencies shall also be subject to the development standards outlined in Section D. 1. c., above.

E. Amendments/Mediation

1. Amendments may be made to this plan using the following procedures.

a. Amendment to this Plan shall only occur upon review and approval of a proposed amendment by all affected agencies, as well as the SCIA operator and, consistent with Public Utilities Code § 21675, shall occur no more than once any calendar year. Failure of all affected agencies to approve the amendment shall constitute a denial of the amendment which shall be transmitted to the local jurisdiction having authority to approve the development proposal. The local jurisdiction shall deny the development proposal or file for mediation in accordance with the mediation process flowchart set forth in the Appendix - Attachment 1 in order to approve the project.

b. If the mediation process has been conducted, once mediation has concluded, any recommendation of the Airport Mediation Board may only be overruled by the local jurisdiction having authority to approve the development proposal if all of the following conditions are met:

1) The local jurisdictions' governing body overrules the Airport Mediation Board's recommendation by a minimum 2/3 vote; and

2) The local jurisdictions' governing body makes the following findings supported by substantial evidence:

a) The proposed use promotes the public interest by providing for the orderly development of SCIA and the area around SCIA so as to promote the overall goals and objectives of the California Airport Noise Standards (PUC 21669) and does not create new noise and safety problems;

b) The proposed use enhances the protection of the public health, safety, and welfare by ensuring the orderly expansion of the airport and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within the areas around SCIA to the extent that such areas are not already devoted to incompatible uses.

An overrule shall only apply to the development proposal for which the amendment was processed, and shall not constitute an amendment to this CALUP. Further, such action shall not relieve the permitting local jurisdiction from further compliance with this Plan.

III. GLOSSARY

Aeronautics Program - A division of the California Department of Transportation with responsibility for the safety and enhancement of all public use airports located within the State.

Affected Agency - a local agency having the responsibility to review, develop and establish plans for achieving land use compatibility between a public airport and its environs. For SCIA, the affected agencies are the County of San Bernardino, the City of Adelanto, and the City of Victorville.

Airport Layout Plan - A plan depicting existing and proposed airport facilities and land uses, their locations, and the pertinent clearance and dimensional information required to show conformance with the applicable standards.

Airport Master Plan - A plan providing guidelines for future development of an airport which will satisfy aviation demand and be compatible with the environment, community development, other modes of transportation and other airports.

Airport Mediation Board - An agency appointed by all affected agencies to serve as an impartial, objective party to review disputes arising from the preparation, adoption and/or amendment of the Comprehensive Airport Land Use. Plan. For SCIA, the mediator is the Local Agency Formation Commission.

Airfield Capacity - The maximum number of aircraft operations that can take place in a given time under specific conditions of airspace, ceiling and visibility, runway layout and use, aircraft mix, and proportion of arrivals and departures.

Approach Surface - An imaginary surface longitudinally centered on the extended centerline of the runway, beginning at the end of the primary surface and rising outward and upward to a specified height above the established airport elevation.

Avigation Easement - A type of easement which typically conveys the following rights:

* A right-of-way for-free and unobstructed passage of aircraft through the airspace over the property at any altitude above a surface specified hi the easement (usually set in accordance with FAR Part 77 criteria).

* A right to subject the property to noise, vibrations, fumes, dust, and fuel particle emissions associated with normal airport activity.

* A right to prohibit the erection or growth of any structure, tree, or other object that would enter the acquired airspace.

* A right-of-entry onto the property, with property advance notice, for the purpose of removing, marking, or lighting any structure or other object that enters the acquired airspace.

* A right to prohibit electrical interference, glare, misleading lights, visual impairments, and other hazards to aircraft flight from being created on the property.

Based Aircraft - General aviation, air carrier and other aircraft which use an airport as a "residence" or home base.

Community Noise Equivalent Level (CNEL) - Ah average daily noise level, averaged for each of the 24 hours, and weighted more heavily during evening and nighttime hours to account for the lower tolerance of persons to noise during these hours.

Compatibility/Consistency - When used in this document, the terms "compatibility", "compatible", "consistent" and/or "consistency" means the action discussed, contemplated and/or approved is not affected by, nor affects, Southern California International Airport (SCIA) and its operations identified in its master plan. Any action which will affect, or will be affected *by,* SCIA and its operations is classified as incompatible or inconsistent. Examples include, but are not limited to: Approval of a specific land use or a level of intensity/density for a land use in the Planning Area which is not listed as Conditionally Acceptable, Normally Acceptable, or Clearly Acceptable on Table 7 in this document; approving a structure within the Planning Area which encroaches into Imaginary Surfaces and/or Object Free Areas; approving or maintaining a plan, ordinance, policy, or program which allows for any of the above, or is otherwise contrary to the development standards contained in Section II.D. 1.

Comprehensive Airport Land Use Plan (CALUP) - a specific plan authorized by State law formulated and adopted by the affected agency -that provides for the orderly growth of each public use airport and the area surrounding the airport.

Crosswind Runway - A runway additional to the primary runway to provide for wind coverage.

Displaced Threshold - A runway threshold that is located at a point other than the designated beginning of the runway.

Federal Aviation Administration (FAA) - A federal -agency charged with regulating air commerce to promote its safety and development, encouraging and developing civil aviation/ air traffic control, and air navigation and promoting the development of a national system of airports.

Federal Aviation Regulations (FAR) - Regulations issued by the FAA to regulate air commerce.

Flight Service Station (FSS) - FAA facility which provides pilot briefings on weather, airports, altitudes, routes and other flight planning information.

General Aviation (GA) - Agricultural, industrial, private business, recreational, air charter, air ambulance service, aerial photography, police patrol, fire control and federal, state and local government aviation.

General Aviation Airport - An airport which does not have scheduled service and which only serves general aviation aircraft.

Imaginary Surfaces - Surfaces established relative to each runway to provide standards or determining "obstructions" in the navigable airspace.

Instrument Approach - An aircraft approach to an airport solely by reference to instruments.

Instrument Flight Rules (IFR) - Rules governing the procedures for conducting instrument flight.

Instrument Runway - A runway specially marked and lighted and served by instruments for landing or takeoff under IFR conditions.

Local Operations - An operation performed by aircraft that remain hi airspace controlled by the air traffic control tower and include aircraft operating in the local traffic patterns and aircraft departing for, or arriving from local practice areas.

Navigational Aid (NAVAID) - Any visual or electronic device (airborne or on the surface) which provides point-to-point guidance information or position data to aircraft hi flight. Frangible NAVAIDS are NAVAIDS which are designed to allow it to fail structurally at a specified impact load.

Noise Contours - Lines drawn about a noise source indicating constant energy levels of noise exposure.

Nonprecision Instrument Approach - A runway airport with a published instrument approach procedure, but which does not provide electronic glideslope information.

Object Free Area (OFA) - A two dimensional ground area surrounding runways, taxiways and taxilanes which is clear of objects except objects whose location is fixed by function.

Obstacle Free Zone (OFZ) - A three dimensional volume of airspace centered above the runway which supports the transition of ground to airborne aircraft operations and vice versa.

Obstruction - Any object of natural growth, terrain or permanent or temporary construction or alteration, including equipment or materials used therein the height of which exceeds the obstruction standards of FAR PART 77, "Objects Affecting Navigable Airspace."

Operation - An aircraft takeoff or landing.

Planning Boundary - The area designated by the CALUP by each adopting affected agency surrounding and including each airport in which the CALUP applies.

Precision Instrument Approach - A runway with a published instrument approach procedure which provides electronic directional and glideslope information.

Project - Any activity which causes either a direct physical change or allows for a subsequent activity which results in a physical change. For purposes of this CALUP, a project includes any activity which requires the issuance of a building .permit, as well as General Plan Amendments, Zone Changes, and/or Specific Plan Amendments, or adoption of ordinances or policies.

Public Use Airport - Publicly or privately owned airport that offers the use of its facilities to the public without prior notice of special invitation or clearance, and that has been issued a California Airport Permit by the Division of Aeronautics of the California Department of Transportation.

Responsible Agency - A local agency responsible, hi the absence of an Airport Land Use Commission (ALUC), for carrying out the duties of an ALUC pursuant to Public Utilities Code Section 21670 et seq. For SCIA, the responsible agencies are die same as the affected agency.

Runway - A defined area on a land airport, utilized for the landing and takeoff of aircraft.

Runway Protection Zone (RPZ) - A two-dimensional trapezoidal ground area centered about the extended runway centerline with significantly restricted land uses hi order to provide safety to aircraft operations and to people and property on the ground.

SCIA - Southern California International Airport, a public airport in the City of Victorville, formerly a portion of George Air Force Base (GAFB).

Stopway/Blastpad - An area beyond a takeoff runway, centered on the runway, designated for use hi decelerating an airplane during an aborted takeoff, and also serves to reduce the erosive effect of jet blast and propeller wash.

Structure - An object, including a mobile object, constructed or installed by man, including but without limitation, buildings, tower cranes, smokestacks, earth formation, and overhead transmission lines.

Traffic Pattern - Projection on the ground of the aerial path associated with an aircraft on the crosswind, downwind, base, and final approach legs of the approach/departures process:

* Crosswind Leg. A flight path at right angles to the landing runway off its upwind end.

* Downwind Leg. A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg.

* Base Leg. A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline.

* Final Approach. A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. An aircraft making a straight-in approach VFR is also considered to be on final approach.

Visual Approach - An approach where an aircraft on a DFR flight plan or operating in VFR conditions under the control of an *air* traffic control facility and having an air traffic control authorization may proceed to the airport of its destination hi VRF conditions.

IV. APPENDIX

A. ATTACHMENT 1

MEDIATION PROCEDURES/FLOWCHART

MEDIATION PROCEDURES

I. GENERAL

A. Per the Public Utilities Code section 21670.1(c)(2)(C) as amended by AB 2831 (enacted January 1. 1995), the San Bernardino County Local Agency Formation Commission (LAFCO) is designated by the Board of Supervisors and local affected City Councils as the "mediator" of disputes arising from the preparation, adoption, and amendment of the comprehensive airport land use plans (CALUP). When a dispute arises between jurisdictions, the following procedures shall be utilized:

1. Affected County/City files with LAFCO a request for a "Mediation Hearing". A filing fee shall be paid by the jurisdiction requesting the hearing. Said fee shall be sufficient to pay for the level of service mandated by the PUC statute.

2. Hearing to be scheduled by LAFCO staff within 30-50 days from the dale of filing.

3. The jurisdictions involved in- the dispute are responsible in providing LAFCO staff all pertinent information. LAFCO staff will prepare a report utilizing the submitted information.

   a. Option: A referral may be made to the County Airport Commission or County Airport Manager for additional information or technical support.

4. Report must contain an analysis, findings and recommendation. The following finding shall be made by the Commission:

   a. The (preparation, adoption or amendment) of the (airport name) CALUP will enhance the protection of the public health, safety and welfare, will provide a community benefit and is compatible with the airport operations because: (provide specific reasons)

5. Report must be distributed to jurisdictions involved in the dispute and LAFCO Commission at least ten (10) calendar days prior to the hearing date.

6. Mediation Hearing: LAFCO Commission must nave a 2/3 quorum in order to conduct a hearing. LAFCO Staff will present report. Representatives from both jurisdictions will present their arguments. LAFCO Commission will deliberate the issue and make their recommendation.

7. The Commission’s written recommendation will be distributed to each jurisdiction after approval of the hearing minutes.

II. MEDIATION HEARING IMPACTS UPON LAFCO

A. Hearing Schedule.

1. Only "Mediation Hearings in which the filing fee has been paid will be scheduled before the Commission

2. Mediation Hearings will involve only disputes in the preparation, adoption or amendment of CALUP's.

B. LAFCO's Staff Workload.

1. LAFCO staff will accept mediation hearing filings, collect filing fees, schedule hearing, prepare report for Commission, distribute reports, present report and distribute written recommendation.

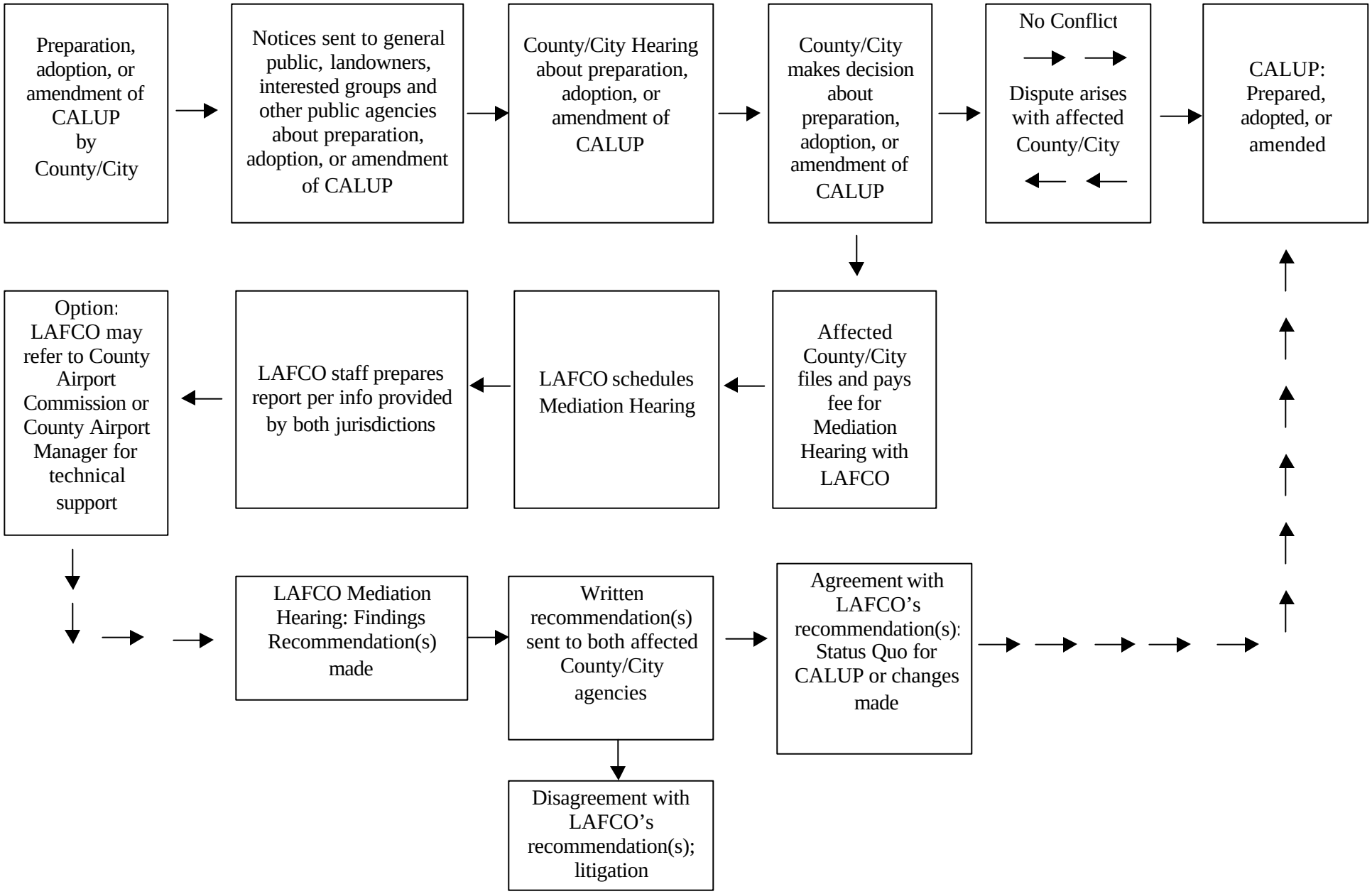
C. Commission Composition at Mediation Hearings.

1. The new statutes do not require a person with aviation experience, background or education to be a member in the mediation process. However, as an option, LAFCO staff may refer the matter to the County Airport Commission or County Airport Manager for additional information or technical support.

D. LAFCO's Budget.

1. A Mediation Hearing Filing Fee will be charged that will be sufficient to pay for the level of service mandated by the statute.

CALUP PREPARATION PROCESS AND CONFLICT RESOLUTION



B. ATTACHMENT 2

PUBLIC UTILITIES CODE SECTION 21670 ET. SEQ.

(Not Available at the moment)

C. ATTACHMENT 3

SAN BERNARDINO COUNTY RESOLUTION 95-81

ADELANTO RESOLUTION 95-26

VICTORVILLE RESOLUTION 95-46

D. ATTACHMENT 4

AIRCRAFT OPERATIONS FORECAST

RMJ & Associates,
"Southern California International Airport SCIA
Aircraft Operations Forecast,"
January 28, 1998